AMERICAN

MARCH · 1958

Cinematographer

THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

In This Issue . . .

- Nominees for 1957 Cinematography Awards
- A Practical Cine-Arma Conversion
- Dissolvelapse—New Technique in Interval Filming

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PUBLICATION OF THE AMERICAN SOCIETY OF CINEMATOGRAPHERS

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ON THE COVER

GLENN FORD prepares to play a scene in the El Paso, Texas, stockyards during location filming for Columbia Pictures' "Cowboy," big-scale screen adaptation in color of the Frank Harris western classic, "My Reminiscences as a Cowboy." Directing the photography is Charles "Buddy" Lawton, A.S.C., seated in center foreground. *Photo by Van Pelt*

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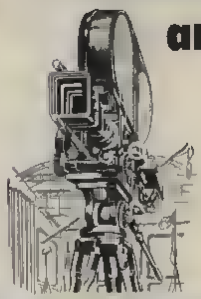

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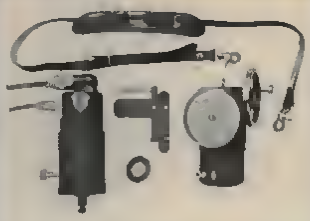

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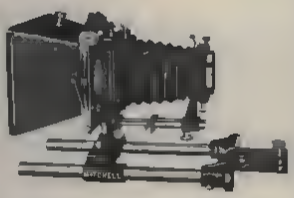

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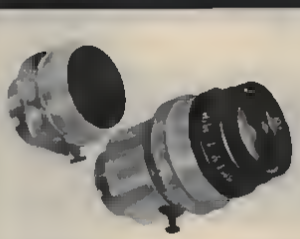

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Industry NEWS

Technicolor Corporation, until now processors of color motion picture films exclusively, is equipping its main Hollywood plant for processing of black and white films and will soon be available to service major and independent film producers for monochrome negative and positive developing and printing.

The company also is dickering with Warner Brothers to purchase that studio's Burbank and Brooklyn Ace laboratories. Deal would include exclusive contract for Technicolor to process and print all Warner Brothers' color, black-and-white and television films.

• • •

IATSE Local 659, the Hollywood cameramen's Union, has joined with other industry crafts and guilds in the fight to prevent sale of post 1948 feature films to television.

Investigating committee of the Union points out that sale of post 1948 films to TV would in time virtually destroy both the motion picture and TV film industries by forcing the two into unwarranted and unnecessary competition.

• • •

Cinemiracle cameras, which utilize three separate negatives for each take, consumed more than two million feet of Eastman Color negative during the production of Louis de Rochemont's "Windjammer," first feature film to be produced in the new ultra wide-screen medium.

• • •

Warner Brothers will be first company, outside of National Theatres, which co-developed the process, to use Cinemiracle cameras in the production of a feature film.

Last month, Director Irving Rapper started shooting tests with the first Cinemiracle camera delivered to the studio for Max Reinhardt's "The Miracle," which will be photographed entirely in the Cinemiracle process.

• • •

As an industry service, Mole-Richardson Company manufacturers of studio lighting equipment and accessories is including a reference library in its new display room on North Sycamore in Hollywood. According to company library will be finest reference source available on any and all subjects pertaining to the fields of motion pictures, television and photography. The library will be open free to the public.

• • •

Kodak researcher Charles E. Osborn has developed a method of obtaining better contact prints in motion picture film processing. Technique involves application of finely dispersed printer's non-offset solution to the negative. Osborn explains that the new treatment prevents formation of Newton's rings when the smooth surfaces of negative and positive film come into close contact.

Newton's rings occur in motion picture film printing from the interference or reinforcement of wavelengths of light, due to the extremely thin layer of air trapped between the two smooth film surfaces. The phenomena are similar to the colored rings seen on an oil slick or soap bubble, according to Osborne, whose full report on the process appears in the March, 1957, issue of the *SMPTE Journal*.

• • •

A new warehouse service for customers in the Denver area has been announced by the Gevaert Company of America, Inc. The warehouse is located at 1925 Blake Street. Motion picture film as well as other Gevaert photo products will be stocked here, according to Gevaert representative, Claude Maillard.

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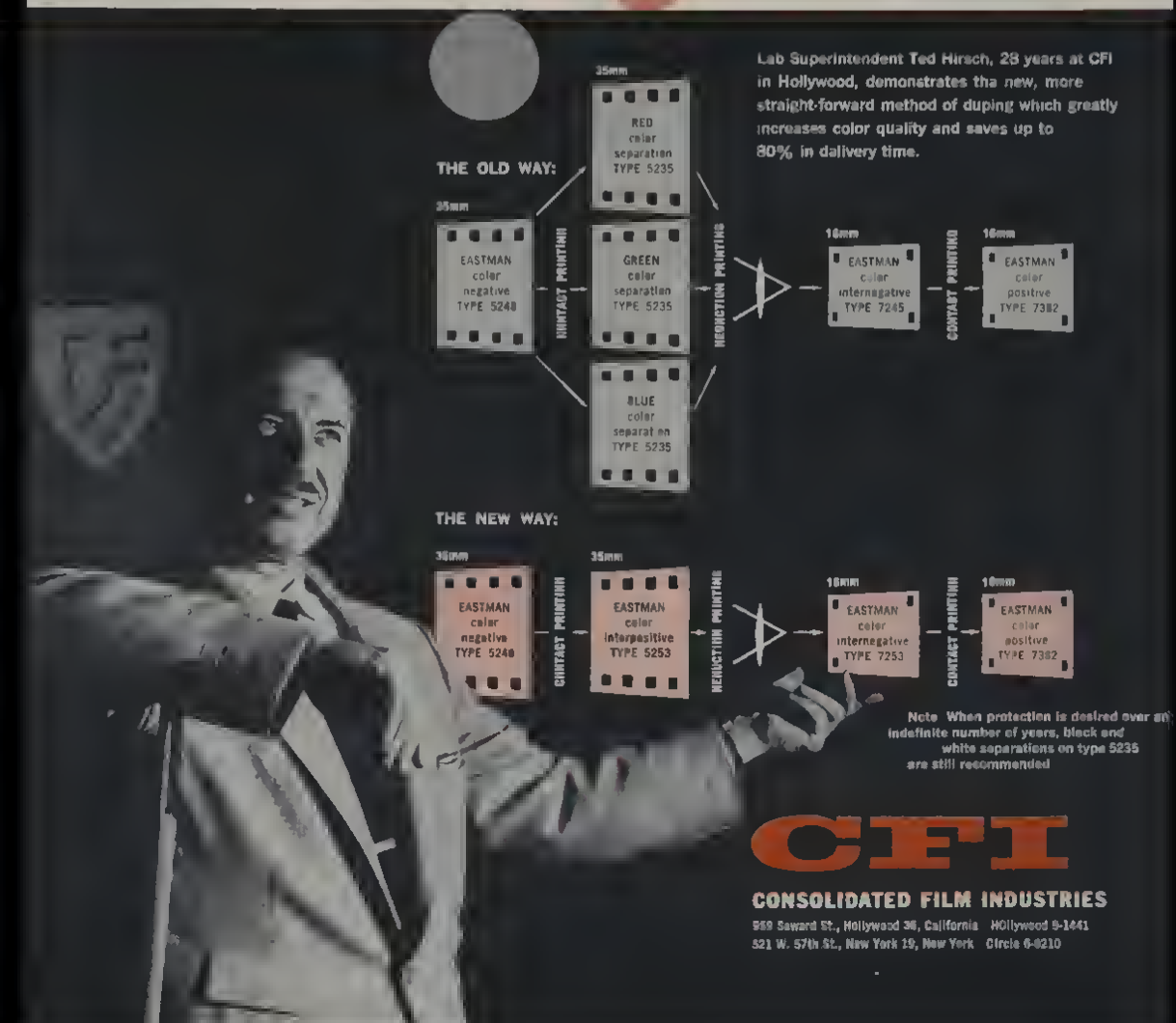
Lab Superintendent Ted Hirsch, 28 years at CFI in Hollywood, demonstrates tha new, more straight-forward method of duping which greatly increases color quality and saves up to 80% in delivery time.



Note When protection is desired over an indefinite number of years, black and white separations on type 5235 are still recommended

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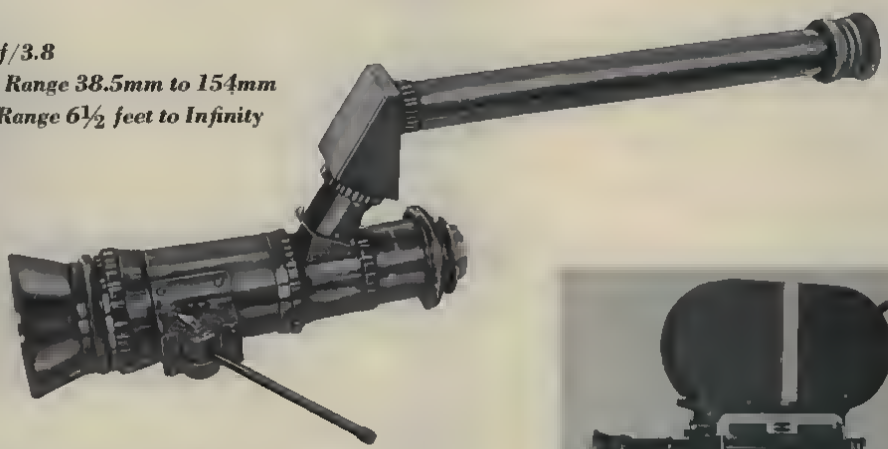

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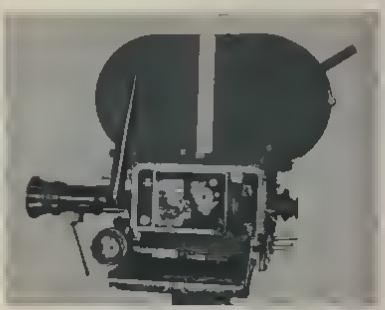

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Photographic Assignments

Who, where and what the industry's cameramen were shooting last month

***Asterisks indicate television film productions.**

ALLIED ARTISTS

● JOHN NICKOLAUS, JR., "Gang Girl" (Roger Corman Prod.) with Richard Bakalyan and June Kenney. Bernard Kowalski, director.

● CARL GUTHRIE, ASC, 'Stallion Trail' (CinemaScope & Color) with George Montgomery and Diane Brewster. R. G. Springsteen, director.

AMERICAN NATIONAL

● GLEN MACWILLIAMS, ASC, "Tombstone Territory"* (Ziv TV) with Pat Conway. Various directors.

● EDWARD CRONJAGER, ASC. "Target"* (Ziv TV) with Broderick Crawford. Jack Hirschberg, director.

● BOB HOFFMAN, "Harbor Command"* (Ziv TV) with Wendell Corey. Various directors. "Target,"* Paul Landres, director, "Highway Patrol"* (Ziv TV) with Broderick Crawford. Monroe Askins, director.

● MONROE ASKINS, "Target"* (Ziv TV) Jack Hirschberg, director.

CALIFORNIA STUDIOS

● LUCIEN ANDRIOT, ASC, "The Life of Riley,"* with William Bendix. Jean Yarbrough, director.

● FLEET SOUTHCOTT, "Have Gun Will Travel"* (Milmaster Prods.) Jean Yarbrough, director.

COLUMBIA

● GERT ANDERSEN, ASC, "Shirley Temple's Storybook"* (Screen Gems) Harry Horner, director.

● LUCIEN BALLARD, ASC, "The Name's Buchanan" (Scott Brown Prods., shooting in Arizona) with Randolph Scott and Craig Stevens. Budd Boetticher, director.

● HENRY FREULICH, ASC. "Playhouse 90"* (Screen Gems) Paul Wendkos, director.

● KIT CARSON, "Casey Jones"* (Screen Gems) with Alan Hale, Jr. George Blair, director. "Father Knows Best"* (Screen Gems) with Robert Young and Jane Wyatt. Peter Tewksbury, director.

● JACK ETRA, "Let's Rock" (Columbia Foster Prods., shooting in N.Y.) with Julius LaRosa and Phyllis Newman. Harry Foster, producer-director.

● JAMES HARVEY, 'Convict for Hire" (Fortress Film Prods. shooting in London) with Griffith Jones and Maureen Connell. Charles Saunders, director.

● FRED JACKMAN, "Adventures of Rin Tin Tin"* (Screen Gems) with Lee Aaker and James Brown. William Beaudine, director.

● CHARLES LAWTON, ASC, "The Last Hurrah" with Spencer Tracy and Jeffrey Hunter. John Ford, director.

● IRVING LIPPMAN, "Casey Jones"* (Screen Gems) George Blair, director.

● JAMES WONG HOWE, ASC, "Bell, Book and Candle" (Phoenix Prods.) with James Stewart, Kim Novak and Jack Lemmon. Richard Quine, director.

WALT DISNEY

● GORDON AVIL, ASC, "Zorro"* with Guy Williams. Various directors.

ERA STUDIOS

● RAY FOSTER, ASC., Penzoil commercial* Bruce Mack, director.

FILMCRAFT STUDIOS

● VIRGIL MILLER, ASC, 'You Bet Your Life,"* with Groucho Marx. Robert Dwan.

FOX WESTERN AVE

● LLOYD AHERN, ASC, How to Marry a Millionaire"* Various directors.

● BRYDON BAKER, "Rawhide."* Charles Warren, director.

● FRANK REDMAN, ASC, "The Perry Mason Show,"* with Raymond Burr. Various directors.

● CHARLES VAN ENGER, ASC, "Man Without a Gun"* Various directors.

GENERAL SERVICE

● NEAL BLICKNER, "The Adventures of Ozzie & Harriet,"* (Stage 5 Prods.) with Ozzie, Harriet, David & Rickey Nelson. Ozzie Nelson, director.

● HENRY SHARP, ASC, 'Bold Journey"* (Advenco Prods.) with Jack Douglas. Leon Barsha, director.

● JAMES VAN TREES, ASC, "Burns & Allen Show,"* (McCadden Prods.) with Gracie Allen and George Burns. Rod Amateau, director.

● HARRY WILD, ASC, "Bob Cummings Show,"* (Laurmac Prods.) with Bob Cummings and Rosemary De Camp. Bob Cummings, director.

● LESTER WHITE, ASC, Eastman Kodak and Colgate commercials* (Filmways, Inc.) Dick Bruner, director.

● WALTER STRENGE, ASC, Ford commercial* (Filmways Hollywood Prods.) Tholen Gladden director.

● PHILIP TANNURA, ASC, "The People's Choice,"* (Nordon Prods.) with Jackie Cooper and Pat Breslin. Jack Cooper, director.

GOLDWYN STUDIOS

● NORBERT BRODINE, ASC, "The Loretta Young Show."* (Lewislor Prods.) with Loretta Young. J. Newland and Wm. Claxton, directors.

INDEPENDENT

● J. BURGI CONTNER, ASC, "The Fun Master"* (shooting Palisades Park, N.J.) with Keenan Wynn. Robert Mulligan, director.

● ERNEST HALLER, ASC, "Man of the West" (CinemaScope & Eastman color, Ashton Prod.) with Gary Cooper and Julie London. Anthony Mann, director.

● SAM LEAVITT, ASC, "The Defiant Ones" (Stanley Kramer Prod.) with Tony Curtis and Cara Williams. Stanley Kramer, producer-director., "The Fearmakers" (Pacemaker Prods. for UA release) with Dana Andrews, Dick Foran and Marilee Earle. Jacques Tourneur, director.

● JACK MARTA, 'Revenge of the Colossal Man" (American International Pictures) with Sally Fraser and Roger Pace. Bert I. Gordon, producer-direcotr.

● KENNETH PEACH, ASC, "The Lost Missile" (Wm. Berke Prod.) with Robert Loggia and Ellen Parker. William Berke, producer-director.

● JACK WARREN, ASC, "The Cosmic Man" (Futura Pictures) with John Carradine and Angela Greene. Herbert S. Greene, director.

● BUD WEILER, "Russell Hayden Presents"* (Russell Hayden Prods.). Oliver Drake, director.

● HAL MOHR, ASC, "The Gun Runners" (Seven Arts Prods. for UA release) with Audie Murphy and Gita Hall. Don Siegel, director.

(Continued on Page 141)

AMERICAN SOCIETY OF CINEMATOGRAPHERS

FOUNDED January 8, 1919, The American Society of Cinematographers is comprised of the leading directors of photography in the Hollywood motion picture and TV film studios. Its membership also includes cinematographers in foreign lands. Membership is by invitation only.

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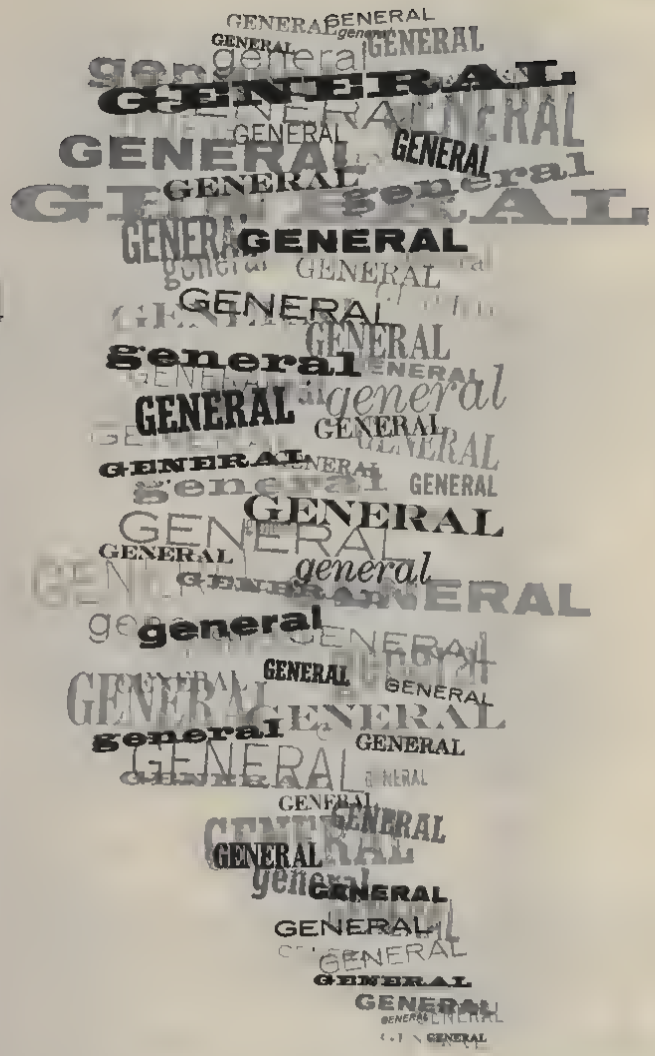

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PHOTOGRAPHIC ASSIGNMENTS

(Continued from Page 136)

• ARTHUR J. ORNITZ, "The Pusher" (Miro Prod. shooting at Mikaro Studios, N.Y.) with Cathy Carlisle, Doug Rogers and Sloan Simpson Gene Milford, director.

KEYWEST STUDIOS

• WALTER STRENGE, ASC, "This is the Life"* (Hamy Films). William Claxton, director

KLING STUDIOS

• FLOYD CROSBY, ASC, "Daddy O" (Imperial Prod.) with Dick Contino and Sandra Giles Lon Place, director.

KTTV STUDIOS

• STUART THOMPSON, ASC, "Lassie"* (Robt. Maxwell Prods.) with Jon Provost and Cloris Leachman Phil Ford, director.

LINKLETTER PLAYHOUSE

• ALAN STENSVOLD, ASC, "People Are Funny"* with Art Linkletter. Irv Atkins, director.

McGOWAN PRODS

• BRYDON BAKER, "Sky King"* Various directors, "Death Valley Days"* Stuart McGowan, director

METRO-GOLDWYN-MAYER

• LUCIEN ANDRIOT, ASC, "Silent Service"* (Calif. National Prods.) Sobey Martin & Jean Yarbrough, directors.

• HAROLD MARZORATI, ASC, "High School Confidential," with Jan Sterling and John Drew Barrymore. Jack Arnold, director

• GEORGE PERINAL, "Tom Thumb" (Galaxy Picts Prod.; shooting in England) with Russ Tamblyn and Terry Thomas, George Pal, director.

• HARKNESS SMITH, "Northwest Passage"* with Keith Larsen Allen Crosland, director

• WILLIAM SNYDER, ASC, "Tarzan's Fight for Life" (CinemaScope & Color. Sol Lesser Prod.) with Gordon Scott and Eve Brent Bruce Humberstone, director,

• ALAN STENSVOLD, ASC, "Infamy at Sea" (Virginia & Andrew L. Stone Prod.) with James Mason, Broderick Crawford and Dorothy Dandridge Andrew L. Stone, producer director

• WILLIAM SPENCER, Jr., "The Thin Man"* with Peter Lawford and Phyllis Kirk Oscar Rudolph, director

• HAROLD WELLMAN, ASC, "Northwest Passage"* Various directors.

• LESTER WHITE, ASC, "Silent Service"* (Calif. National Prods.). B. Kowalski, director

• JOHN SEITZ, ASC, "The Badlanders" with Alan Ladd and Kay Jurado. Delmer Daves, director.

• GEORGE FOLSEY, ASC, "Imitation General" with Glenn Ford and Raina Elg. George Marshall, director

(Continued on Page 150)

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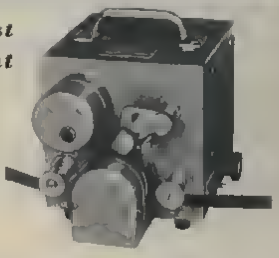

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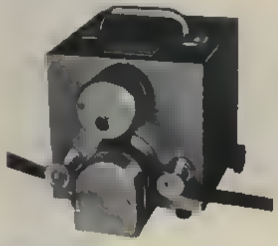

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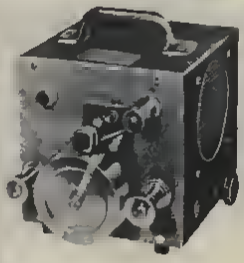

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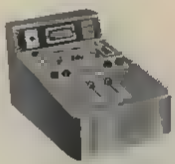

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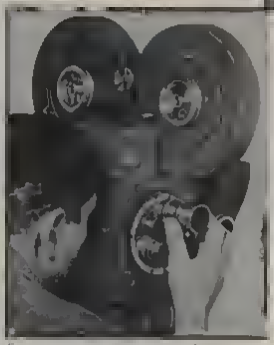

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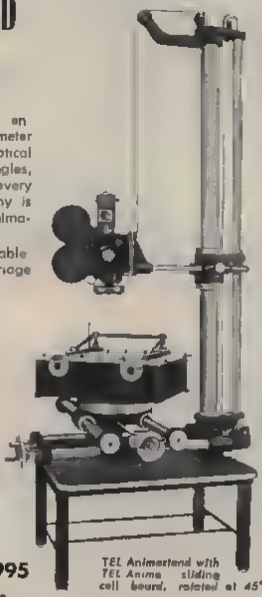

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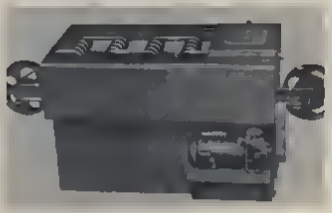

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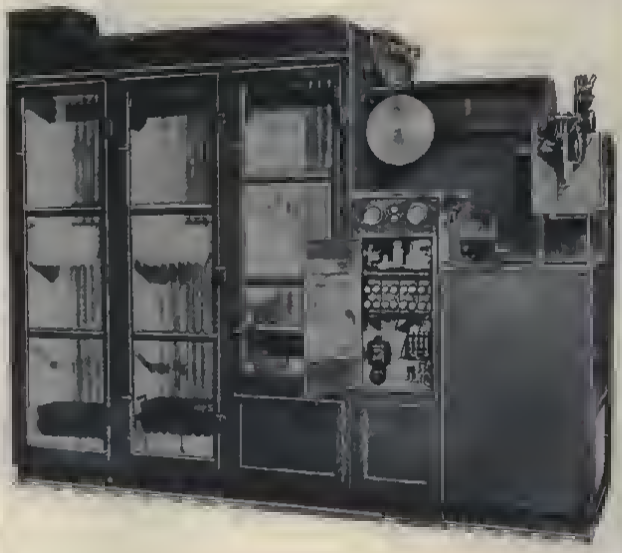

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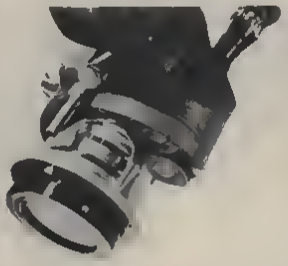

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TECHNICAL QUESTIONS & ANSWERS

Conducted by Wolter Strenge, A.S.C.

QUESTIONS relating to cinematography or other phases of film production are invited from readers and will be answered by letter by Walter Strenge or by other qualified members of the American Society of Cinematographers. Questions and answers considered of general interest will appear in this column.—*Ed*

Q I am preparing to make an extended trip through Afrira to shoot 16mm color film. What are the prerautions I should take to protect my supply of film in that climate?—*R. H. H., Chicago, Ill.*

Answer. An important thing to remember is that excessive heat builds up the negative speed over a period of time. Therefore, keep your film cool

Whenever I start on a trip such as you propose, I always paint the sealing tape on the film cans with clear Duco lacquer. This thoroughly seals pores of tape and prevents any moisture entering cans.

These rules should also be followed:

Do not unseal any more cans of film than can be used in one day.

Take along a means for desiccating film, that is—for keeping it dry or moisture-free A metal container that can be sealed with tape into which is placed a quantity of silica-gel, will do Each roll of exposed film should be placed in desiccator for 24 hours, during which time the silica-gel will absorb any excess moisture from the film. After desiccation, the repacked negative should be carefully sealed with tape and the tape itself sealed with Duco lacquer.

Color film should not remain in the tropics longer than 60 days after exposure.

Where it is possible to keep film supply refrigerated, do so

As an added safety measure I always add one full stop exposure for black-and-white film; one-half stop for color—*Carl Berger, A.S.C.*

Q I am planning to shoot a documentary in color in the CinemaScope format, using a 35mm Arriflex camera fitted with an anamorphic lens Is it necessary that I have sprockets of this camera replaced with the new CinemaScope sprockets in order that my picture can be produced for theatrical showing with CinemaScope equipment?—*J. H., Mandan, No. Dakota.*

Answer. It is unnecessary to alter the sprockets of your camera for CinemaScope photography. When your negative is printed for C-Scope projection, where magnetic-optical prints are required, they are made on positive stock having the special CinemaScope perforations Optical-sound prints are made on positive having standard Eastman perforations—*Sol Halprin, A.S.C., 20th Century-Fox Studio.*

Q What is meant by "color saturation"—a term I saw recently in an article referring to Kodachrome duplicates?—*J. McG., Billings, Montana.*

Answer: Webster's Collegiate Dictionary defines color saturation as that "attribute of chromatic colors which determines the difference from a gray color of the same brilliance, distinctness or vividness of hue."

As an example, if we take a dark paint and add white paint and mix, the resulting mixture (or color) will have less saturation than the original color. As more white is added, there will be less saturation.—*Ted Fogelman, A.S.C. Associate*

Q I am about to start shooting a commercial film for a glass company. Many of the shots will be filmed on location and will involve combination interior-exterior setups which involve the problem of balancing the interior illumination with the daylight coming through windows and doors.

Is there a filter material available in sheets as large as 8x10 feet that I can use over door and window openings to balance daylight to 3200° K? Any distortion of the exterior view, of course, would indicate a false color of the glass, so window filters would have to be very accurate. On some larger installations I would have to correct the incandescent light — teners, seniors, and double-broads—at 3200° K to daylight. What filters are available for this purpose?—*H. H., Euclid, Ohio.*

Answer. Your problem is to filter daylight down to 3200° K Obviously the Wratten Filter No 83 (for Type 5268 Kodachrome Commercial film) and the

(Continued on Page 149)

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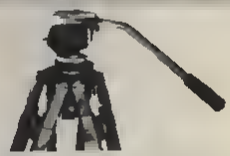

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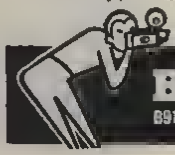

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QUESTIONS & ANSWERS

(Continued from Page 146)

Wratten No. 85 (for Type 5248 Eastman Color Negative film) are the proper filters to use to achieve the desired color temperature conversion. Therefore, for your purpose, it is practical to use any gelatin filter material which will reduce daylight to 3200° K. It is quite simple to make a comparative reading with a good color temperature meter of the filter materials mentioned above, which unfortunately are available only in small sheets, and the gelatins which are available in larger sheets.

Further aid to this problem is to be found in the Eastman Kodak Co. leaflet No. 11-47-CH, entitled "Kodachrome Commercial Film 16mm Type 5268." On page 9 it is stated that "Light to supplement daylight . . . can be supplied by carbon arc lamps fitted with white-flame carbons and the Brigham Y-1 filter, or by Mazda C.P. lamps color-corrected with Macbeth Whiterlite filters . . . daylight from windows may be shielded with a suitable straw-colored filter, such as the Brigham Y-1 or the National Theatre Supply No. 54 Light Straw."

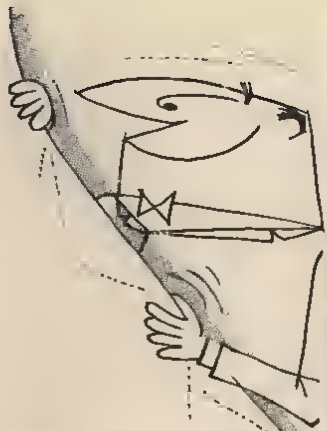
I would say that the above information also holds true for Type 5248 Eastman Color Negative, although the recommended lens filter has a different number. In both cases, however, the problem is to filter daylight down to 3200° K.

Camera Equipment Co., New York, N.Y., can supply "85" correction acetate filter material in 40" x 50" sheets. An "83" correction acetate filter of the same size will soon be available from the same company. Other sources of gelatin sheets, namely Mole-Richardson Co., Brigham, Roscoe and National Theatre Supply Co. all have gelatin filter materials which come close to the required specifications for color photography.

In answer to the second part of your question, there are, of course, the Macbeth Whiterlite filters available for spotlights which convert 3200° K to approximately 5800° to 6000° K.—*Zoli Vidor, A.S.C.*

Q How is deep focus achieved in multiplane animation photography?—*J. H., Glendale, Calif.*

Answer: Deep focus is achieved by using sufficient volume of light and duration of exposure to permit use of small lens stops that provide increased depth. No special optics are required. Any good lens can be used for this work.—*Ub Iwerks, A.S.C., Walt Disney Studio.*



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(Continued from Page 141)

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● SID HICKOX, ASC, "December Bride,"* (Desilu Prods.) with Spring Byington and Frances Rafferty. Fred de Cordova, director, "Lucille Ball and Desi Arnaz Show" * with Lucille Ball and Desi Arnaz. Jerry Thorpe, director

● ROBERT PITTACK, ASC, "The Californians" * (Desilu Prods.) with Richard Coogan Byron Haskin, director

● JOE NOVAK, ASC, "Meet McGraw" * (Desilu Prods.) with Frank Lovejoy. Lee Sholem, director, "Philip Marlow" * (Pilot; Desilu Prods.) Ted Post, director

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● LIONEL LINDON, ASC, "Alfred Hitchcock Presents" * (Revue Prods.) Robert Stevens, director; "Schlitz Playhouse of Stars" (Revue Prods.) Paul Henreid, director, "The Millionaire" * (Don Fedderson Prods.) Gerald Mayer, director, "General Electric Theatre" * (Revue Prods.) J Bricken, director

● RAY RENNAHAN, ASC, "Schlitz Playhouse of Stars" * (Revue Prods.) Don Weis, director; "M Squad" * (Revue Prods.) with Lee Marvin Various directors.

● JOHN RUSSELL, ASC, "Jane Wyman Theatre" * (Revue Prods.) with Jane Wyman Various directors, "M Squad" * (Revue Prods.) with Lee Marvin James Nielson, director, "Alfred Hitchcock Presents" * (Revue Prods.) Alfred Hitchcock, director.

● HERB KIRKPATRICK, "Wagon Train"* (Revue Prods.) Various directors

● WILLIAM SICKNER, ASC, "Leave it to Beaver" * (Gomalco Prods.) with Barbara Billingsley and Hugh Beaumont Norman Tokar, director, "Bachelor Father" * (Bachelor Prods.) with John Forsythe Andrew McCullough, director

● MACK STENGLER, ASC, "The Millionaire" * (Don Fedderson Prods.) Various directors; "Heinz Studio 57"* (Revue Prods.) Earl Bellamy, director, "Special Agent Seven" * (Revue Prods.) John Brahm, director, "Jane Wyman Theatre" * (Revue Prods.) with Jane Wyman Sidney Lanfield, director

● ELLIS THACKERY, ASC, "The Restless Gun" * (Window Glen Prods.) with John Payne Various directors, "Wagon Train" * (Revue Prods.) Various directors, "Wells Fargo" * (Revue Prods.) with Dale Robertson Earl Bellamy, director.

RKO

● GEORGE STAOL, "From the Earth to the Moon" (Technicolor; Bogeaus Prods; shooting in Mexico City) with Joseph Cotton. Byron Haskin, director

RKO-PATHE

● GEORGE DISKANT, ASC, "Alcoa-Goodyear Theatre"* (Four Star Prods.) Robert Florey, director; "Mr Adams & Eve"* (Bridget Prods.) with Ida Lupino and Howard Duff Various directors.

● WILLIAM MARGULIES, "Jeanie Carson Show"* (Four Star Prods.) with Jeanie Carson, Paul Landres, director; "Richard Diamond, Private Detective" * (Four Star Prods.) with David Janssen Various directors.

● GUY ROE, ASC, "Alcoa Goodyear Theatre" * (Four Star Prods.) Tom Carr, director, "Trackdown" * (Four Star Prods.) with Robert Culp Don McDougall, director, "Dick Powell's Zane Grey Theatre" * (Four Star Prods.) with Dick Powell Various directors.

● WILLIAM SNYDER, ASC, "Tarzan and the Trappers" * (Pilot; Sol Lesser Prods.). Chas Haas, director

HAL ROACH STUDIOS

● RAY FERNSTROM, ASC, Nescafe Coffee commercial * Jack Reynolds, director.

● EDWARD FITZGERALD, ASC, "The Gale Storm Show," * with Gale Storm Norman McLeod, director

(Continued on Page 187)

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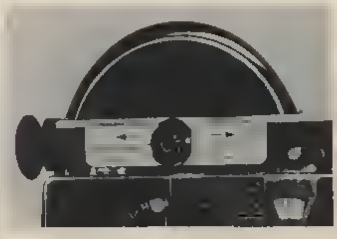
Portable TV Pedestal

Houston-Fearless Corp., 11805 West Olympic Blvd., Los Angeles 64, announces a new low-priced, lightweight, completely portable TV camera pedestal. This new Model PD-10 is designed to do work of a tripod-dolly combination. It provides a rigid, steady mount for all monochrome TV cameras and will accept any standard head. Raising or lowering camera is easily accomplished by means of a hydraulic jack mounted on center column. Three 8" hard rubber-tired wheels can be locked in parallel for straight-line tracking or left free for maximum maneuverability. Descriptive brochure and prices may be had by writing manufacturer direct.



Bolex Magnifier-Viewer

Pellegrini-Piek, 1545 Lombard Street, San Francisco, announce a new dual-power magnifier conversion for the Bolex Reflex camera viewfinder. Turning control knob on side of viewer varies magnification from 8X to 16X, enabling the cameraman to pin-point focus with any lens. Conversion automatically increases viewer field size from the original 6X to 8X full-field size. Prices range from $54.00 to $60.00, depending on whether camera and viewer are both sent in for the conversion.

Color Control

Triad Color Control, said to be the first 16mm reversal-additive printing process providing scene-to-scene color correction and control is announced by Southwest Film Laboratory, Dallas, Tex. Entire operation is controlled electronically by punched tape.

Magnifying Viewfinders

Hi-C Products, Pasadena, Calif., announces a series of magnifying monocular viewfinders for Auricon, Mitchell, Wall and other cameras for use with telephoto lenses. Finders present greatly magnified image, brightly illuminated and permit tracking with accurate centering of fast-moving objects. Brochure and price lists are available by writing manufacturer direct.

Pan-Cinors for Mitchells

Benjamin Berg, Co., 1410 No. Van Ness Ave., Hollywood, announces availability of the Pan-Cinor zoom-type lens for Mitchell NC and BNC cameras. Vari-focal range is 38.5mm to 154mm; focusing range is 6½ feet to infinity. Aperture is f/3.8.

Pan-Cinor affords reflex viewing directly through the lens. Finder image is erect and enlarged, and gives accurately-framed view of scene with no loss of light transmission to film. Available also are auxiliary closeup lenses.

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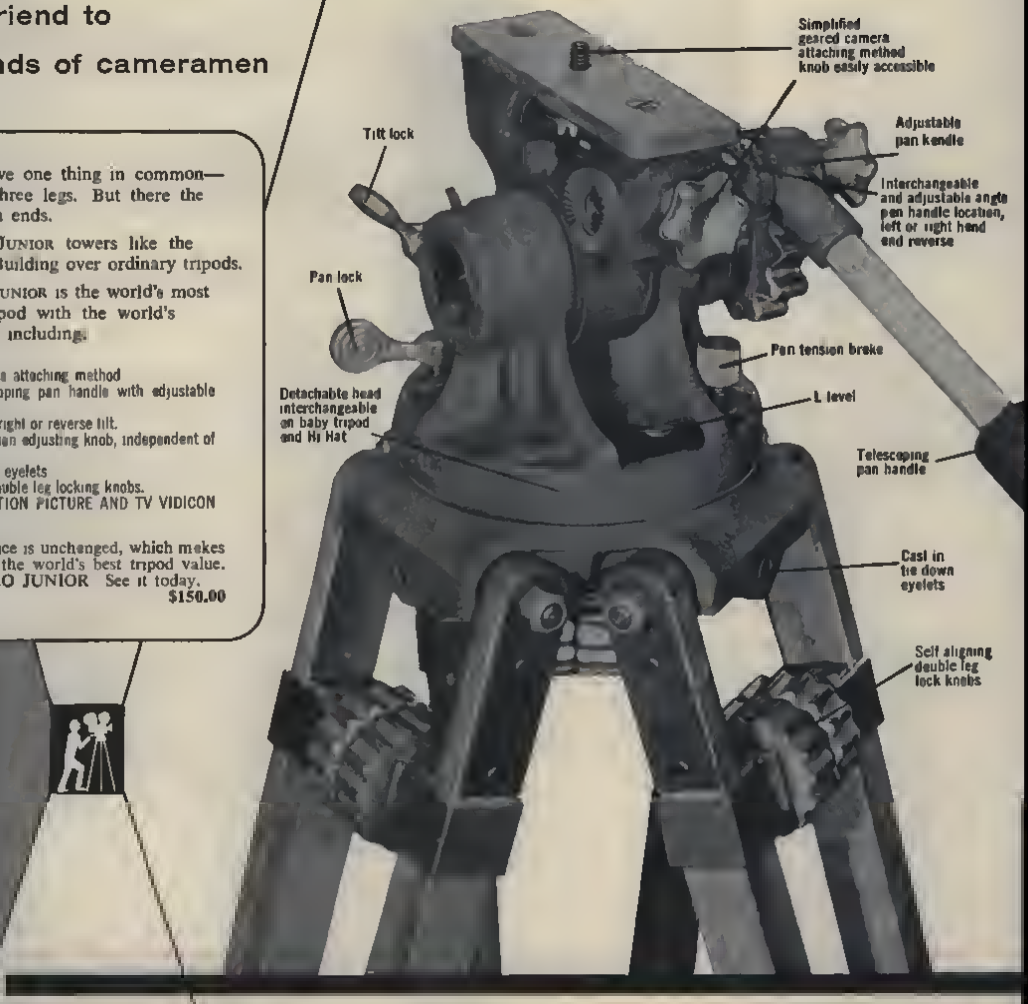
Simplified geared camera attaching method knob easily accessible
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Interchangeable and adjustable angle pan handle location, left or right hand and reverse
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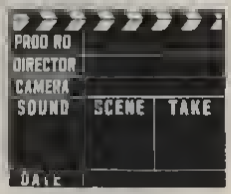

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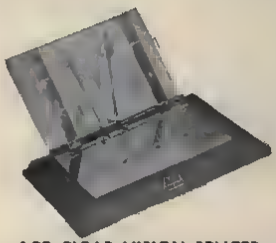

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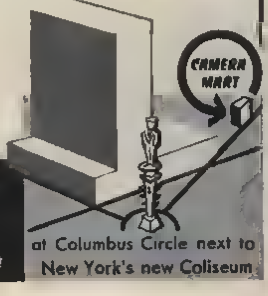

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News briefs about the A S C., its members, and important industry personalities

GEORGE MURPHY

EDWIN SCHALLERT

RONALD REAGAN

LOU GREENSPAN

GUESTS OF HONOR at the ASC's monthly dinner in February were actor George Murphy; Edwin Schallert, recently-retired motion picture editor of Los Angeles Times, actor Ronald Reagan, and Lou Greenspan, Executive Secretary of Motion Picture Industry Council —all of whom are pictured above. Murphy proposed Sid Solow as Patron Saint of Cameramen. Schallert said 'Cameramen's future lies in TV as well as in feature films.'' Reagan told of his recent experiences in Washington, D.C., where he made plea for tax reductions. MPIC's Greenspan thanked the ASC for its continuing support of the Council.

ASC MEMBERS at their February dinner-meeting, honored the men who were previously honored by George Eastman House in Rochester for their camera-work on pictures filmed between 1926 and 1930. Each man received duplicate of framed photo of himself which will hang on ASC's Wall of Fame. Pictured are (L to R) Peverell Marley, George Folsey, Hal Mohr, Arthur Edeson, and Lee Garmes. Also honored was William Daniels who left before photo was made. Charles Rosher, James Wong Howe and John Seitz, also honored by George Eastman House, were not present at the ASC dinner.

W J GERMAN and Eastman Kodak representatives, also honored guests of the ASC, occupied seats at one table. Front left is William J. German, president of W. J. German, Inc. and Eastman Kodak's Donald Hyndman. Opposite German is John Prater III and absent was Edward O. Blackburn.

AT SPEAKERS' table George Murphy explains Motion Picture Industry Council's aims to Edwin Schallert and ASC Prexy Burnett Guffey. Ronald Reagan, at right, is talking with MPIC's Lou Greenspan (out of picture at right). Later Reagan told cameramen of industry's efforts to accomplish tax reductions.

A word to the wise . .

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Consequently, when we design a new product it must meet the following requirements:

1—It must be either completely new on the market, designed to do a specific job—or

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3—It must be equal to or lower than existing equipment in price.

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Friction Head Is Guaranteed For Five Years.

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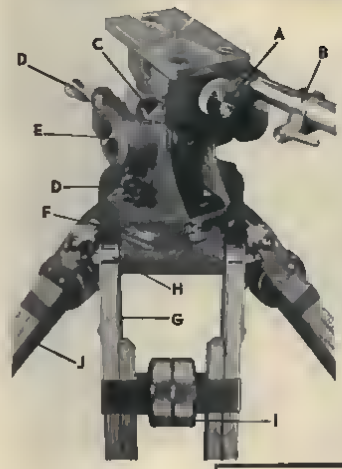
MODEL 202



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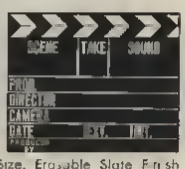

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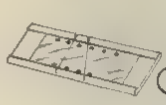
Register film in guide sprockets, cut with angled razor blade in groove



Remove film, lay in Magic Mylar, sticky side up

Lay film on top of Magic Mylar, carefully registering sprocket holes and apply finger pressure on film *

That's all . . . the Butt Splice is finished!

(*For double strength Magic Mylar may be placed on both sides of film)

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MANNING HIS own Akeley camera, Elmer Dyer photographs approach of plane as it comes down through Grand Canyon, for a scene in "Hot Rod Angel," a black-and-white production by Stan Kolis

STAGING A "crashed plane" scene for "Hot Rod Angel" on floor of Grand Canyon. In foreground camera assistant stands by while Dyer, in the background, assists with the rehearsal.

Filming On A Mile-low Location

You've heard of mile-high locations. This assignment took aerial cameraman Elmer Dyer a mile below the Grand Canyon rim to shoot air and stunt scenes for "Hot Rod Angel."

By ELMER DYER, A S C

"GET DYER to do it!"

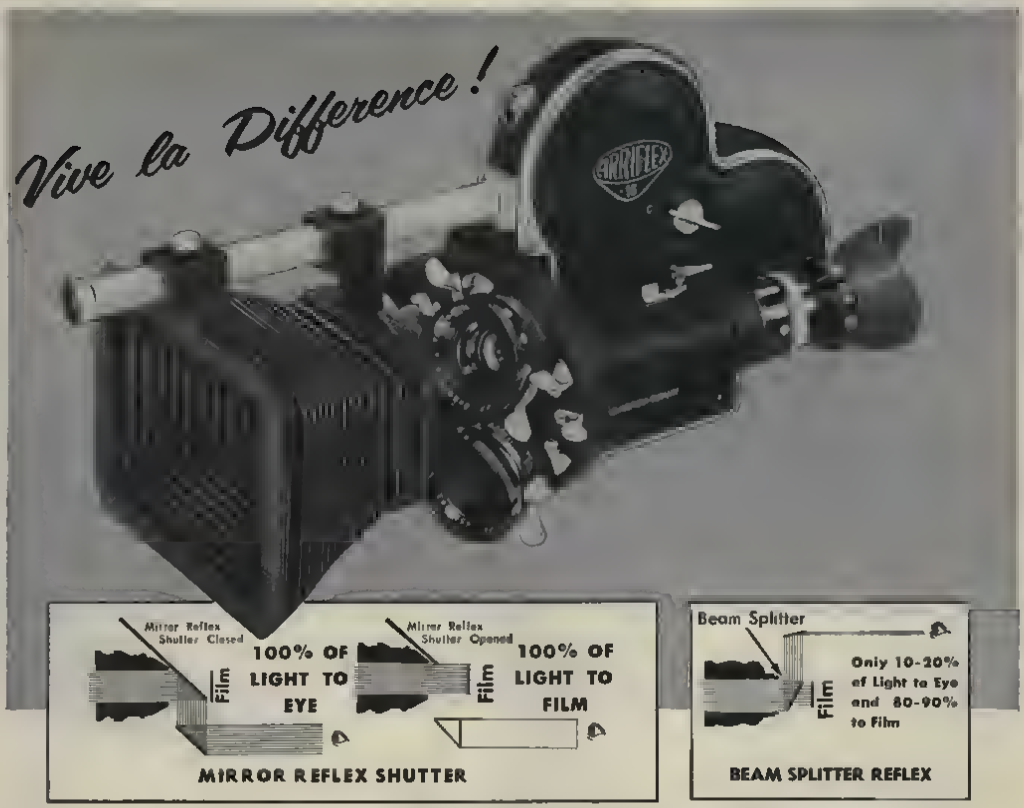
Whenever I hear that remark, I know what it means: some producer with a particularly hazardous assignment of air shots wants me to risk my neck and camera equipment to make them. It's nothing new. I've been getting such assignments for more years than I care to remember. Because, in the early days of movie making, I took naturally to shooting stunt and thrill shots, I became Hollywood's aerial photography specialist and stunt cameraman. Now, more than two decades later, whenever there is a risky shooting job to be done aloft, the call invariably goes out: "Get Dyer to do it!"

ELMER DYER, ASC, veteran aerial photography specialist and the Akeley camera and lens equipment he uses on many of his assignments. Akeley camera, notable for its gyro head, was forerunner of present-day tracking cameras used in missile photography

A typical assignment is the one I completed recently for producer Stan Kahs, for his latest film "Hot Rod Angel." He telephoned to ask if I'd be interested in shooting some scenes for his picture at Grand Canyon. It would involve flying down through a narrow gorge and onto the canyon floor—something few people ever have done—he said. "But I've got a good pilot for the job," he reassured me.

I'd done something like that about 20 years before, and I remembered the hazards and the risks we had encountered at that time. Today, most of the canyon floor terrain suitable for landing a plane is considerably diminished, due to erosion and the action of the Colorado River.

(Continued on Page 186)



The great advantages of a reflex viewing system in a movie camera are obvious:

No parallax, no finders to match, no takeover inconvenience but continuous focusing and viewing through the taking lens.

There are two ways in which reflex viewing can be accomplished:

1. By means of a *mirror reflex shutter* which rotates at 45° between lens and film plane.

   The great advantage of this system is the fact that 100% of the light goes to the film and the eye intermittantly. When the shutter is open there is no interference between film and lens. When the shutter is closed, its mirror surface reflects all of the light to the eye. Result: Easy focusing and viewing on a bright crisp ground glass image even in dim light, or when the lens is stopped down.

   The Arriflex—designed for the professional—uses the mirror reflex shutter, which of course is a much more costly design.

2. By means of a beam *splitting mirror* or *prism* which is mounted between lens and film. This reflects some of the light (about 20%) to the eye and transmits the balance to the film.

   The disadvantages of this system are:
   The light reflected to the eye is so weak that it is difficult to focus or even sight, unless the lens is wide open and the scene brightly illuminated. In dim light, or if the lens is stopped down, the finder image is so weak it is practically useless. But the light going to the finder is taken away from the film, requiring the f stops of the taking lens to be specially adjusted. The beam splitter permanently in the light path, and close to the film plane, frequently accumulates dust and other foreign matter which may ruin the picture.

Don't take our word for it! Try it yourself. Take an Arriflex 16 and a "beam splitter reflex" and look at the same scene, through similar focal length lenses, at various f stops from wide open to f22. You will exclaim with us: Vive la difference!

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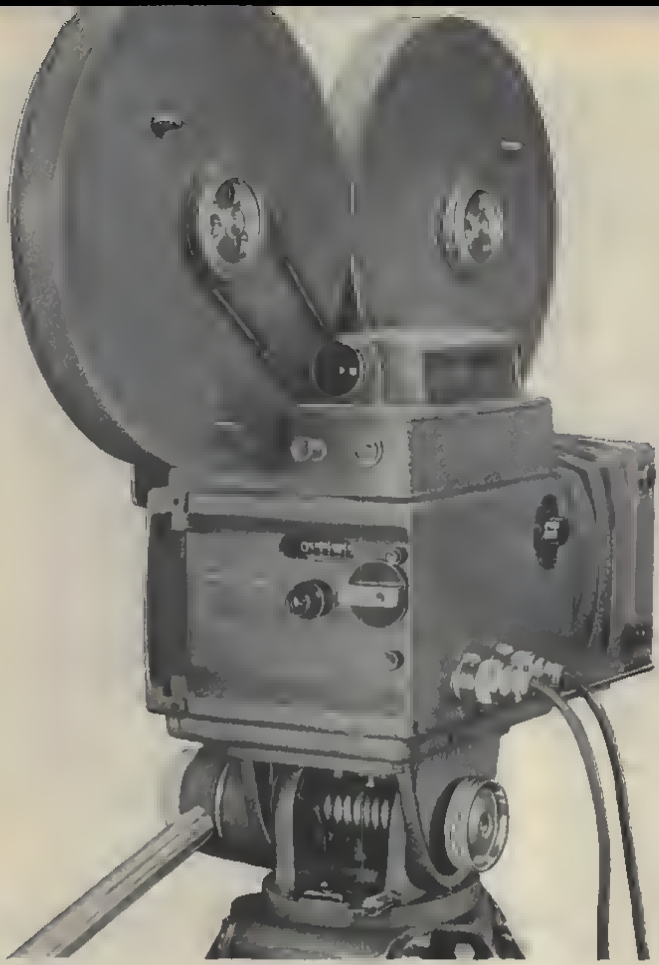

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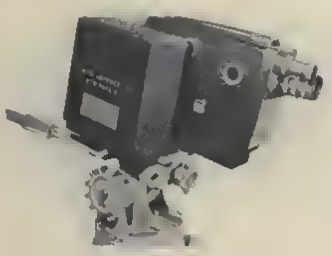

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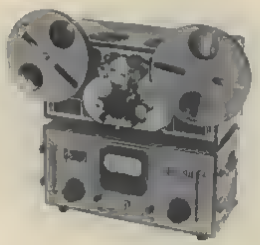

Magnasync Portable Magnaphonic Sound Recorder Model X-400

For 16mm Magnetic film. Completely synchronous. Can be operated in stacked position (*shown*) or as a console unit. Ideal for low budget producer. MARK IX and SAFARI Models, and Dubbers also available. **$965.00**

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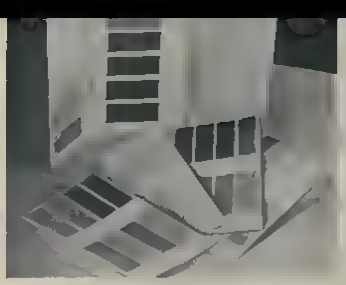

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ESSENTIAL TO dissolve-lapse photography is mounting the camera on a fixed register base attached to a permanent support in a pre-determined position—in this case, a steel column sunk in concrete. This permits camera to be remounted and aligned at intervals for purpose of exposing additional footage to show progress of change or growth of subject. Takes are subsequently lap-dissolved to form a continuity record of progress.

Dissolve-Lapse—New Technique In Interval Photography

Methad, used to record grawth or change over long periods, shaws oction at narmal poce instead of acceleroted as in time-lapse phatagraphy.

By LEE CHANEY

WHEN WALT DISNEY began the construction of Disneyland, being basically a movie-minded individual he decided be wanted a motion picture record of the complete construction of the park To produce this in the conventional manner would bave entailed more film than the average individual would have the patience to sit through in projection, so it was decided to shoot the project a few feet at a time and edit the footage into a film that would comprise a greatly compressed visual record of Disneyland's growth—something on the order of a time-lapse movie

This was not a project for time lapse filming, however, for to have photographed it that way would have entailed problems of fast moving shadows, everchanging quality and direction of sunlight, and accelerated action of any persons moving within the scenes The alternative was to make daily shots of desired activity from the same camera position and angle and at precisely the same time each day—then lap-dissolve the resultant short shots so the complete record would unfold on the screen in normal action in a series of dissolves—with each scene showing a measure of progress in the project's construction. This technique is known as *dissolve-lapse.*

Dissolve-lapse is an outgrowth of time-lapse and is used to accomplish much the same result—to compress time and motion. The two are complementary In fact, dissolve-lapse came into being to solve many of the problems that time-lapse often presents. To those who have had the opportunity to view thousands of feet of time-lapse, made under all conditions, it soon becomes apparent that there are occasions when this technique has its limitations

Generally, good time-lapse photography requires a consistent source of light In the studio, obtaining light of the same intensity and color over a period of time is an easily-solved problem; but when shooting outdoors, the sun is not so obliging. If the time-lapse shot is used to compress a short period of time such as the duration of a sunset, the cameraman can easily keep check on light conditions and adjust the lens stop accordingly. But when the proposed shot must be made over a period of several weeks or even months, then shooting becomes a problem. Obviously, in a project of this kind, it would be impossible for the cameraman to be at the camera to change the aperture each time the sun goes behind a cloud. And so exposure must be based on average conditions. If exposure is set for a sunny day, frames shot on a cloudy day will be underexposed And cutting badly exposed frames out of time-lapse sequences plays havoc with progressive action.

Recently devices have appeared on the market that solve the problem of ever-changing exposure. Several companies are manufacturing light-sensitive controls that can be linked to the lens iris of the camera to compensate for various exposure levels. Yet their present cost and adaptability to all cameras still makes dissolve-lapse an attractive choice. And even when the problem of exposure has been solved by such a device, other inherent problems in time-lapse still remain.

In long period time-lapse shot outdoors, the very fact there's a night often becomes distracting This is assuming that the time-lapse unit works all the time. But regardless, if the time-lapse interval is widely spaced, the days pass by on the screen so quickly that this effect predominates the scene. The culprit is moving shadows. With each new day.

they move back from one side of the screen to the other

Widely spaced intervals also make certain types of subject motion appear confusing. An example of this is a time-lapse record of the construction of a building. Photographed, day to day, over a period of several months, such a scene often shows distracting random movement of equipment and men. Often there will be extreme movement from frame to frame without apparent continuity. Finally, there's an economic consideration. Shots that tie up expensive equipment for months on end can make the cost important, too.

The practical solution to most of these problems can be found through the use of the dissolve-lapse method of photography. This technique consists of providing a fixed register-mount for the camera in a position suitable for taking in the scene desired. Precision construction and adjustment of the register-mount insures that the camera will be accurately re-positioned each time it is brought to the site and set in place for a subsequent interval of photographic recording. The length of these individual shots can range from one second to one minute or more, depending on the purpose of the record and the subject matter. The individual shots are either lap-dissolved by the cameraman with the camera, or where the scenes for the final record are to be selected and edited, the dissolves are made later in the laboratory.

In the strict sense, dissolve-lapse is not a substitute for time-lapse. Yet the idea expressed to the audience can be much the same: to show a passage of time or to show a progressive action; and even in scientific studies, dissolve-lapse can be used equally well as time-lapse. One advantage of dissolve-lapse is the fact the subject motion is always normal. In time-lapse, of course, motion is speeded up, and in shots where people are involved, this fast motion sometimes makes the scene ridiculous when it was not so intended.

In dissolve-lapse, normal action in each scene segment has clarity. An example is a progression of dissolve-lapse shots made of a typical downtown street. Scenes made throughout the afternoon and early evening could show the normal activity of shoppers, the homeward rush of office workers, the quiet streets during the dinner hour, and the increasing bustle as the city's night life begins.

The dissolve-lapse and time-lapse renditions of the traffic's ebb and flow would differ in the fact that the dissolve-lapse version would show none of the helter-skelter movement of time-lapse. Its movement in a scene would be normal. Whether this is an advantage or disadvantage depends on the use to which the record will be put. For a continuous minute-to-minute record, time-lapse is the logical choice. But to provide an idea of the normal pace at which an action occurs, against a background of gradual long-period change, dissolve-lapse is a better means of getting it. It also has the added advantage of making clear delineations of each period it is desired to point up.

By its very nature, dissolve-lapse is extremely flexible and has many varied possibilities. Depending on the effect desired, one might wish to shoot dissolve-lapse scenes at a speed differing from normal. Here the camera can be undercranked or overcranked. Another effect that's conceivable would be to slow down the speed of the camera with each successive dissolve-lapse shot. Thus, a scene would be shot at normal speed the first time, at 20 fps. the second time, at 16 fps. the third time, and so on. With the shots dissolved, the effect would be a gradual transition from normal to fast motion. Or one could go the other way—from normal action to slow motion. Indeed, there's no reason why scenes for dissolve-lapse cannot also be shot in time-lapse. But perhaps this is putting the cart before the horse. Let us say, instead that if sections of time-lapse are selected which differ from each other by periods of time, then dissolved optically, you've got dissolve-lapse time-lapse. This is the answer to the time-lapse problem of a night occurring in continuous day-to-day exterior shots. Each day's footage could be dissolved to the next day's footage, eliminating the under-exposed frames shot during the night.

It's obvious from the foregoing that in shooting dissolve-lapse, we have two elements of time to think of—the camera speed and the frequency with which the shots will be made. In final presentation, two additional factors increase the possibilities of this technique. They are: the screen time of each individual scene and the length of the dissolve.

When the dissolves are to be made by the laboratory instead of in the camera, one can gain further flexibility and impart a measure of variety in the overall tempo by specifying dissolves of different lengths. Also, if the effect of a dissolve is different than expected, it can be done over by the lab without the need for re-shooting—as would be the case where the dissolve is made in the camera.

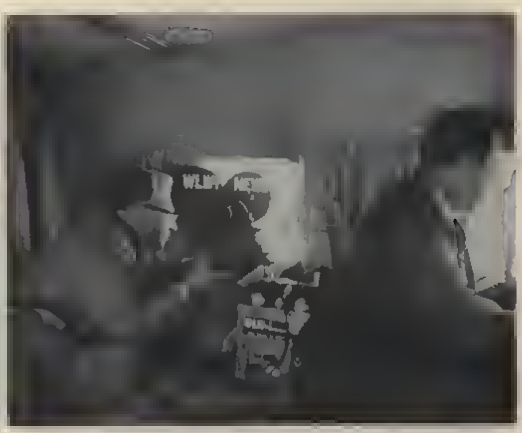
Since dissolves are an essential part of the dissolve-lapse technique, those who undertake it should understand something of the procedure for prepar-

(Continued on Page 184)

SUBJECT OF DISSOLVE-lapse study was this estate scene, purpose of which was to show progressive change of natural growth throughout spring and summer.

SAME SCENE—different day, different season. Since shot at left was made, flowers have grown up in foreground and colors of background foliage, etc., show seasonal change.

WLWi's specially converted Cine-Voice sound camera in hands of George Willeford (left) records in picture and sound street-corner intreviews of Indianapolis Christmas shoppers.



AUTHOR Landrum and staffmen Willeford of WLWI record sound-on-film their experiences and views from a new Allison turbo-prop airliner cruising at 20,000 feet en maiden flight

A Practical Cine-Voice Conversion

Fast, efficient one-man coverage of news events for TV achieved with 400-foot conversion and lightweight audio-power unit.

By BILL LANDRUM
Chief Cinematographer, WLWI, Indianapolis, Indiana

WHEN THE CROSLEY Broadcasting Corporation was granted Channel 13 in Indianapolis, Indiana, last March, one of its first and salient moves was to set up the best-equipped news department in the area. Both radio and television broadcasters in Indianapolis are noted for their aggressive coverage of local news events; between them they maintain some ten well-equipped mobile units on the road day and night. This formidable competition we faced with determination. Resourcefulness would not be enough; we had also to be "light on our feet"—able to move fast unhampered by cumbersome camera equipment.

Having a background of experience in the news field with another Indianapolis station, I was given the task of planning and acquiring the equipment necessary to set up a news department for Indianapolis' newest TV station, WLWI. Based on previous experience I knew we would need, in addition to a 16mm silent camera and equipment, at least one lightweight single-system sound camera having a film capacity of 400-feet. This capacity is a must for any kind of acceptable news event coverage, because with a hundred-foot camera, one invariably runs out of film just as the action or subject matter is at its best.

(Continued on Page 180)

WORKHORSE of WLWI's TV news department in this converted Cine-Voice camera with 400-ft. magazine. At right is compact, light-weight carrying case housing power supply, amplifier, batteries and audio controls. Complete portable unit weighs but 21 pounds

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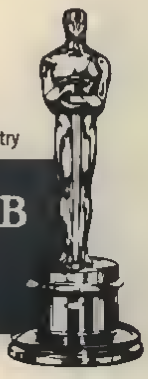

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ELLSWORTH FREDRICKS, ASC

"Sayonara"

"IN OUR pre-production talks" said Fredricks. "Josh Logan had emphasized that our photographic approach to 'Sayonara' was to be bold; to employ the art of cinematography to the fullest; to utilize to the utmost the full scope of artistry and theatrics that is peculiar to the motion picture medium; and whenever possible to use the camera to capture the full flow and movement of the natural locales to point up the scenic attributes and the time of action as only the motion picture camera can do." All this and more Ellsworth Fredricks has accomplished in the photography of "Sayonara."

1957 "OSCAR" NOMINEES

By ARTHUR E GAVIN

ONLY FIVE motion pictures are in the race this year for the Academy of Motion Picture Arts and Sciences' single "Oscar" award for 1957 photographic achievement—all of them color productions. Out of the original preliminary list of ten productions, reported in our February issue, the following five were selected by vote of the Academy membership as contenders for this year's photographic achievement award:

"An Affair To Remember," 20th Century-Fox production photographed by Milton Krasner, ASC.

"The Bridge On The River Kwai," Horizon-Co-

(Continued on Page 183)

JACK HILDYARD

"The Bridge On The River Kwai"

WHEN BRITISH cinematographer Jack Hildyard (left) visited the ASC Clubhouse in Hollywood in 1956, Harry Stradling, ASC, showed him the Society's "Wall of Fame" where hang the portraits of members who have won "Oscars" for cinematography, and prophesied that one day Hildyard's picture may also hang there. In the photography of "Kwai" Hildyard manifests rare and refreshing artistry in filming exteriors and demonstrates that careful composition and lighting can play as big a part in the effective photography of action played out-of-doors as on the sound stage.

RAY JUNE, ASC

"Funny Face"

USING A VistaVision camera for the first time, perhaps it was the scope of this new double-frame system as much as the exciting story that inspired Ray June to such heights of achievement in color photography as displayed in "Funny Face." Few productions in recent years have demonstrated such versatility of camera treatment, which ranges from extreme effects to comedy lighting and which is largely responsible for much of the production's popular acclaim.

MILTON KRASNER, ASC

"An Affair To Remember"

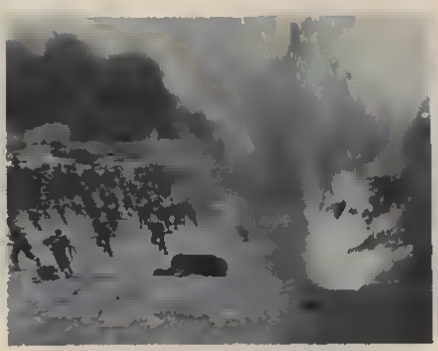
ONE OF THE things that makes "An Affair To Remember" a photographic achievement to remember, is the skillful manner in which superlative photographic artistry has been employed to lend subtle but nonetheless strong pictorial emphasis to scenes, whether staged indoors or out. Milton Krasner (left), shown here with his favorite gaffer, Kenny Lang, handled his camera like a rare Stradivarius in concert with director Leo McCarey to put on film the scenes that alternately wring laughs and tears from audiences. Scene compositions throughout are refreshingly provocative as they are different

WILLIAM MELLOR, ASC

"Peyton Place"

THE VAST and intricate tapestry against which the tempestuous and realistic story of "Peyton Place" unfolds is a noteworthy achievement of effective photographic interpretation. Throughout this picture William Mellor's photography displays a meticulous choice of camera set-ups, composition and lighting. His versatility in lighting interiors was never more evident. Mellor takes up where the art director left off to give character and atmosphere to a room with his crafty lighting technique. Result is portrayals seem more inspired, and story situations more realistic. In photo at left, cinematographer Mellor, standing left of camera, watches Director Mark Robson rehearse scene on location in Maine. *(Photo by Guy E. Nichols).*

NERVE CENTES of directional system during shooting of beach scenes for "Dunkirk" was three walkie-talkie sets, each transmitting on different wave-length. Microphones were labeled EFX (for special effects), ROATS and ARMY. At the microphones were the author and two members of Royal Corps of Signals.



ONLY BY RADIO and PA systems could vast and dramatic action such as this be coordinated and directed for best photographic coverage by the four cameras that were set up at strategic locations

Walkie-talkies Aid Shooting Of Epic Exteriors

How on elaborate system af radio communicatian simplified staging and shooting af beach landing scenes involving 4000 men for the British production "Dunkirk."

By BAYNHAM HONRI
Technical Supervisor, Ealing Films, London

TIME AND TIDE wait for no man, especially when a company's filming on location. To photograph the beach scenes in "Dunkirk" we had to face up to the fact that the maximum number of troops required for these scenes—estimated at about four thousand—would be available for two days only. Those days, therefore, were "fixed feasts" no matter what the weather was like. And as it turned out, it was anything but what we wanted.

Adverse weather was but one problem; more formidable was the matter of communications between the production unit and those responsible for the vast spread of activity in the beach landing scenes. The inclement weather we encountered only intensified the problems of communication.

Waving flags or dropping handkerchiefs might have been entirely satisfactory as means of communication or signalling back in 1913 when Will Barker directed the shooting of beach scenes for "Jane Shore"—but such methods wouldn't do here. Our major problem, therefore, was how to insure the maximum amount of long shot shooting, to cover the master shots in the quickest possible time, and if possible, to allow a little leeway for getting one or two extra shots as well.

The answer was in one word—*control*. Give Leslie Norman, the director of the film, the means of controlling a huge crowd either by individual sections or as a whole, with the minimum amount of outlay of lung power on his part, and then he would be able to devote the whole of his energies to the conception of the overall scene—a combined operation of men, little ships, explosions, smoke, cameras, sound and special effects.

It is true that the microphone and public address loudspeakers have long since replaced the megaphone which, in the days of the silent film, was the badge of office of the film director. For "Dunkirk" the legendary rules on how to film a medieval battle scene (Winning side: two steps forward, one step backward. Losing side: one step forward, two steps backward. Action: Jab with pike) could not possibly apply.

The pattern of the scenes to be filmed was too complex for control by a general broadcast on loudspeakers. Individual sections would have to be given their own particular instructions before and even during the shooting by the assistants at the side of the director.

With all these points in mind I drafted a communications plan for Michael Forlong, associate producer on "Dunkirk", which envisaged the use of a number of radio telephones, walkie-talkies, public address system and Verey lights. Ealing Films already had Post Office licenses for radio opera-

(Continued on Page 182)

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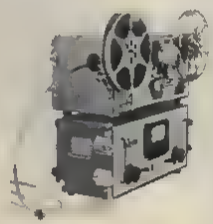

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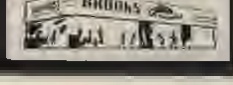

FIG. 1

FIG. 2

EXAMPLES OF photography with high-speed infrared film under two different light sources: Fig. 1—darkened room, infrared illumination, Fig. 2—room lights on. Meter reading, 12 foot-candles. In Fig. 1, audience is watching a film screening; in Fig. 2, audience is listening to discussion of film subject following the screening.

A Report On High-speed Infrared Film

One of the fastest films currently available is Eastman Kodak's High-speed Infrared Film. Its extremely high sensitivity and infrared qualities present some problems but offer great possibilities in special applications.

By BERNARD R. KANTOR
Department of Cinema, University of Southern California

MOTION PICTURE photography of people or things in complete darkness is easily accomplished today, using Eastman Kodak's High Speed Infrared film. This film is unique in that it offers unlimited possibilities for new and rare photographic studies in motion, but its very high emulsion speed presents some minor problems for the photographer. These observations are the result of a filming project recently conducted at the University of Southern California.

One phase of this project involved making a motion picture study of an audience in a small theatre watching a motion picture program. The subjects were not to be aware they were being photographed. Following the motion picture screening, a 20-minute discussion was to be held. A synchronous sound record of the discussion was also to be made. My responsibility was to make the required motion and still picture coverage of the project.

In order to determine what film was to be used, initial photographic experiments were conducted with Tri-X negative, using the fastest lens available to us. But even with extensive over-development of the film, we could not get a satisfactory image where the film was exposed under conditions of a typically darkened theatre. We next considered infrared film, and Eastman Kodak Company's High Speed Infrared negative—which is available in both 16mm and 35mm—was proposed. We obtained a quantity of 16mm for the motion picture camera and a supply of 35mm for our still cameras.

The first problem presented itself when the film supply was delivered to us: we had ordered 100-foot rolls of

16mm for the preliminary experiments. We found them marked "Dark Room Load." It would have been more convenient for us had they been daylight loads. When we unpacked the film in the darkroom, we found it was wound on daylight spools. This film proved so highly sensitive that the camera had to be loaded in nearly complete darkness or fogging of the negative would result despite the fact it was loaded on the daylight-type spools. The Mitchell camera magazines however—both the 400-foot and 1200-foot — proved quite satisfactory when loaded with infrared film as long as the light-trap pads of the magazines were in good condition.

Handling the 35mm infrared negative proved still another problem. Since we planned to use it in a Leica camera, which had been selected for making stills, it was necessary to load it on regular 35mm cartridges. A bulk film loader was obtained for this purpose. We then exposed several cartridges to determine correct exposure. The film was given average development in D-76. However, we were disappointed to find, after development, that each roll had bad light streaks. We traced this to faulty light-trap pads in the cartridges. The solution here was simple, although inconvenient: it was necessary to load the cartridges in absolute darkness, then seal them in light-tight cans until ready for use. Subsequently, the Leica had to be loaded and unloaded in absolute darkness.

Our next problem was determining the most suitable light source to use for infrared photography under the conditions imposed by the project at hand.

FIG. 3—Artist's sketch of the small motion picture auditorium where project described by author was conducted. Arrow points to bullet-type reflector containing lamps filtered for infrared photography. Conventional room lights were in ceiling-flush fixtures. While camera is shown in sketch, it was concealed behind a screen during conduct of project. White light illumination from regular lamps measured 12 foot-candles.

Since we had also to make a sync sound record, we would have to shoot at 24 fps. Added to this was the fact our subjects were to be photographed in a darkened theatre.

To illuminate the seating area of the theatre for infrared photography, we mounted PAR-38 projector-flood bulbs in bullet-type reflectors in the ceiling, as shown in Fig. 3, and over each fixture mounted a No. 87 gelatin filter (Fig. 4). The visible light in the theatre imparted by these lamps was fairly low—an important consideration since the audience was not to be distracted by light while viewing motion pictures on the screen. In initial tests, we obtained excellent exposure at about f/8 with the PAR bulbs burning at 130 volts. However, we ran into trouble when the gelatin filters wilted from the excessive heat and became ineffective after only a few minutes burning of the lamps.

We then obtained glass filters of suitable size to cover the lamp openings;

(Continued on Page 178)

FIG. 4—Ceiling fixtures proved too hot for gelatin or glass filters.

FIG. 5—PAR-38 globes were given filter coating for infrared illumination.

FIG. 6—Screen behind which camera was concealed for unobtrusive filming.

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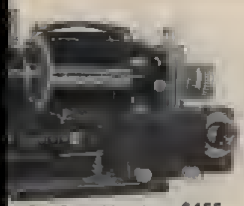

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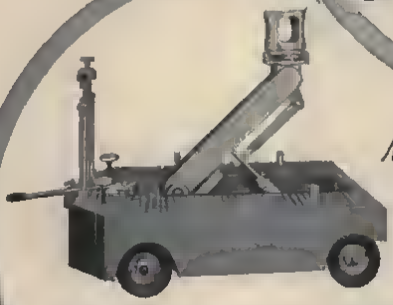

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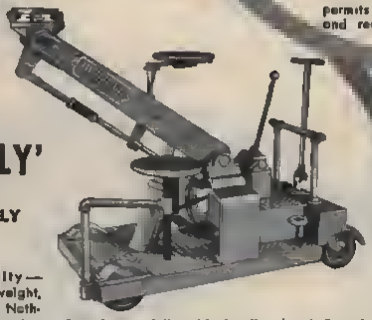

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A 1958 Report On

16MM COLOR POSITIVE PRINTING

By JOHN FORBES

THREADING a high-speed printer for straight picture and sound operation at the Calvin Company laboratory

A GREAT DEAL has happened during the past twelve months to improve the lot of those who employ 16mm or 35mm color positive in their motion picture productions. As the Calvin Company, Kansas City, Mo., has pointed out in the current issue of its workshop publication, *The Aperture*, film materials have improved, printing and processing problems have been solved, and considerable valuable experience has been accumulated in both the laboratory and the projection fields.

What is the compartive quality between 16mm and 35mm prints today? The Calvin Company believes that the ranking remains about the same, but that the degree of difference between the two color mediums has been minimized.

"First, from 16mm color reversal originals," the company points out in its report, "we consider:

1. The 16mm reversal color print made direct from a 16mm reversal color original to be the best-accepted screen product.
2. The 16mm color positive print made from a 16mm color internegative (with the negative printed from the 16mm original) to be a very close second.
3. The 16mm color reversal print made from a 16mm color reversal master to be "comparable" to the 16mm color positive print—preferred by some on definition. The colors reproduce differently, and the dupe stock cost is higher."

What about 16mm color prints from 35mm color negative materials?

"On the basis of the 35mm and 16mm materials presently available and being used," the report continues, "we have no question whatsoever but that 16mm color positive release prints of subjects shot in 35mm negative color will be made in exactly the same manner and with exactly the same steps as are now being utilized for 35mm-to-16mm black-and-white release printing.

"In other words, from the 35mm camera negative will be printed a 35mm low-contrast positive. Then, from the 35mm positive a 35mm color internegative will be made for 35mm release work, or a 16mm color internegative for 16mm release printing. Both the 35mm and the 16mm release printing will be contact printing.

"We have looked at comparison prints side by side on the screen—a 16mm positive color print reduced directly from the 35mm color camera negative versus a 16mm color positive print printed in contact from a 16mm color reduction internegative—and found that it's possible, but not too easy, to pick which is which.

"This is most significant, in that the laboratory can now provide first-line quality 16mm color positive release prints from 35mm color materials by the contact method, making possible faster delivery and lower cost."

A discussion such as this usually leads into still another subject: What are the pros and cons of shooting 35mm negative color as against 16mm reversal color?

"Here again the answer finds an exact parallel in the proven black-and-white experiences," the report continues. "In general, if the film is to be made for 35mm distribution, shoot 35mm negative color. If it's being made for 16mm distribution, shoot 16mm reversal color.

"Cost is usually the deciding factor. Unless the higher costs of 35mm production can be spread out over hundreds of prints, the 35mm costs may well stall the budget.

"Readers may recall the cost study we made in 1955 (*The Aperture*, Vol. XV No. 8). These figures, still an accurate comparison, established the following costs for production of a 20-minute film, shot 5 to 1, with half the camera footage work-printed, excluding all costs except film and processing, and including one sample print:

"The total film-and-processing costs for the assignment, shot and work printed in 16mm reversal color, was $686.96.

"The comparative 35mm costs were $3069.00 for the film printed direct from the camera negative, $4239.00 for the film printed by means of a duplicating negative, and $5211.00 for the film printed by the three-strip color separation process.

"That's a sufficient difference to call for a careful consideration of the choice, 35mm or 16mm.

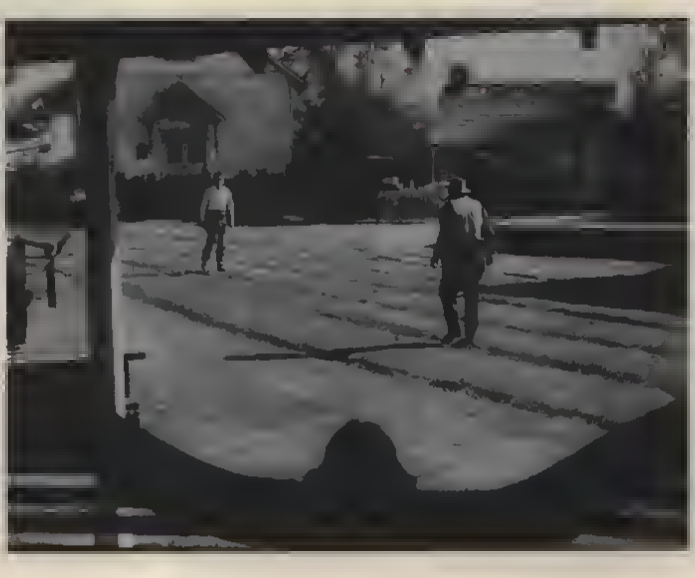
"Can better quality be exposed on 35mm? Yes.

"Can better 16mm prints be made by reducing from 35mm, as compared to direct 16mm production and printing? Yes—theoretically. But, the results don't always justify the theory.

"And, the Big Question: Is the slight potential improvement worth the large known difference in production cost? In most cases—no."

(Continued on Page 180)

Composition is the real art of cinematography. Knowing when and how to frame a scene is the mark of a cameraman's maturity



EFFECTIVENESS of framing is demonstrated in these two photos of same action. By moving camera back and framing action within saloon doorway (right), action is better oriented to the story and the scene is greatly enhanced compositionally.

How And When To Frame A Scene

By JOSEPH V. MASCELLI

ONE OF THE ATTRIBUTES of a good cinematographer is the ability to know when and how to "frame" a scene for improved compositional or pictorial result. The enhancing effect of a frame, particularly for establishing long shots, sets the stage, contains the action, and prevents the eye from wandering off screen. Framing can have still another important function — that of imparting a pseudo third-dimension to a scene.

Framing elements should be relatively unobtrusive and appropriate to the scene in which they are used. Some of the more familiar framing elements are tree branches, windows, doorways, arches, street lamps, sign posts, port holes, iron grilles, bridges, etc. The frame need not necessarily be symmetrical—that is, frame or enclose the scene equally on all sides. A framed scene is much more appealing compositionally when shot from a three-quarter angle instead of straight on. The angle reveals the frame's depth, imparts a feeling of solidity and prevents it appearing simply as a cardboard cutout.

Back-cross or even complete back lighting will add to the effect by sending a sun splashed pattern of light toward the camera—repeating the frame's outline on the ground, plus supplying long, leading shadows which add depth to the setting. Back lighting can be used to edge-light the frame and separate it from the more distant view. Brilliant edge-lighting can impart a luminous, ethereal quality to leaves and other

translucent objects used as a framing device. A frame can often serve as a shield, preventing the sun's direct rays from striking the camera lens.

Frames should contrast with background objects and the scene as a whole. Distinct separation is necessary for best results. A dark frame against a light background will act as a vignette, appear separated from the principal subject and keep the eye from wandering, while directing it to the lighter area of the scene.

A frame should never be photographed in a flat front light, otherwise it will have the same tonal or color values as the scene and merge with it. Frames should appear in silhouette, semi-silhouette or partial shadow. If front light is unavoidable a tree branch, a gobo or a "cookie" can be used to add a shadow effect and thus break up and tone down the light falling on the framing device. A foreground figure, in profile or gazing toward the scene, can add a human interest element to an otherwise static frame.

Partially illuminated foreground frames are more effective in color than black-and-white. The trouble with most color films is that they contain too many saturated colors. Little relief is furnished by pastel hues, neutral grays or even rich blacks. A frame in partial silhouette recorded in soft underexposed bluish hues will offer subtle contrast to the correctly-exposed warmly-illuminated background. Such framing can be highly dramatic. So always expose for the principal part of the scene —*never* for the frame.

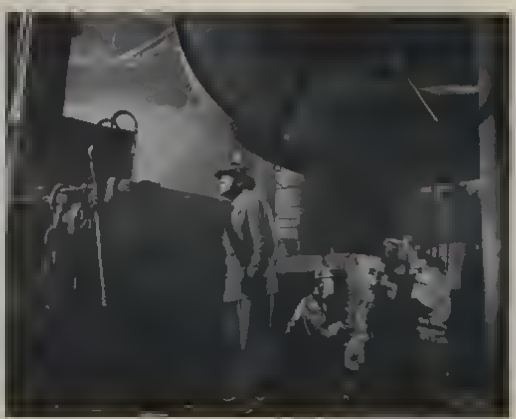
Frames can aid in telling a story. The wing and landing gear of a giant airliner, framing a scene of boarding passengers, suggest fast travel. A bridge framing a distant city, provides a leading line to carry the audience across the vast expanse of water into the scene. A canopied boat deck depicts a welcoming harbor as a ship makes port. Silhouetted factory chimneys belching fire and smoke, framing a distant swinging crane, suggests industry. A long, low, overhanging branch, together with a lazy winding white fence, framing a farm setting, conveys a quiet, easy-going country atmosphere. An arch, framing an old Spanish Mission, not only offers an intriguing composition, but re-

(Continued on Page 184)

TREE BRANCHES and rambling fence in foreground combine to make a pleasing frame for the rustic vista in background

AN ARCHWAY in silhouette minimizes the blank sky area and gives weight to upper portion of this scene from "Johnny Belinda"

WIND-LASHED trees form another type of effective framing for this scene, also from "Johnny Belinda," filmed by Ted McCord, ASC.



TWO COLUMNS and a giant wheel were utilized here to give a framing effect to a fine pictorial composition for a tense chase scene.

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Zoom Lens For 16mm Cameras

New varifocal lens expands scope of and lends diversification to 16mm cinematography

By JOSEPH HENRY

A NEW VARIFOCAL lens that enables 16mm cameramen to zoom in on subjects with all the impressiveness of a TV sportscast has been introduced by Bell & Howell Co., Chicago. With a maximum opening f/2.2 it is rated the fastest zoom lens on the market, having a 4-to-1 range of focal length variation.

Moving the zoom handle changes the focal length of the lens progressively from wide angle to normal to telephoto, and vice-versa, affording the versatility of many lenses in one. It also permits the photographer to keep right on shooting while zooming from closeups to long shots, or from the latter to a big closeup.

The new lens is ideal for achieving special pictorial or compositional effects and for giving impact to action scenes. In filming a baseball game, for example, the wide-angle setting can provide overall coverage of most of the playing field, enabling the camera to "see" the plays develop. When the action becomes localized, as in a play around second base or home plate, you instantly zoom in for a dramatic closeup. Similarly, closeup shots made of pitcher or batter during the play can also lend added interest.

For the 16mm travel film photographer the zoom lens can be particularly useful. In filming a market place, for example, he can make a wide-angle shot to establish locale, then quickly zoom to telephoto position for revealing closeups of people and interesting detail within the scene—a native basket weaver, marketplace vendor, church spire, or an architecturally intresting doorway.

The focal length of this new B&H zoom lens, which has an aperture range from f/2.2 to f/22, is continuously adjustable from 17mm, the wide-angle position, to 68mm—equivalent to a 2-2/3-inch telephoto. There are click stops for those who wish to set the lens for shooting at any of the intermediate positions (focal lengths)—20, 25, 30, 35, 40, 50, and 60 millimeters—which points are indicated on a clearly-market scale on the lens barrel.

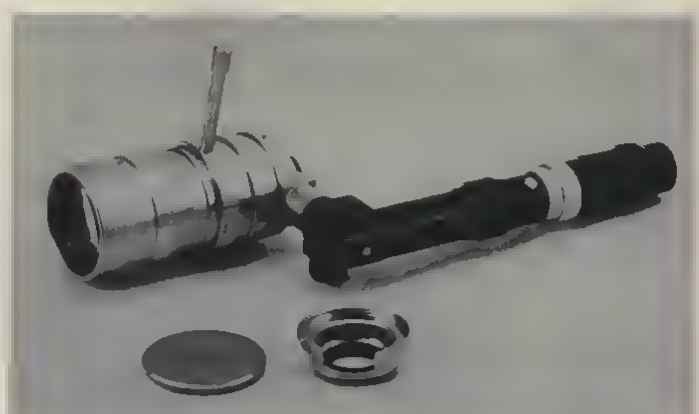
The four to-one ratio in focal length represents a 16 times change in the area viewed by the lens, and provides a range of horizontal angle of view from 31° 24′ at 17mm to 8° 2′ at 68mm. At the maximum telephoto setting the subject image is 2.7 times larger than the image obtained with a normal lens.

The zoom handle provides constant and instantaneous control of focal length. Four tapped holes equally spaced around perimeter of adjusting ring permit locating handle for maximum convenience to the operator. The three holes not used may be plugged with easily-removable fluted screws.

The lens is equipped with its own reflex viewfinder, which shows exactly

(Continued on Page 182)

WHEN THE PINS go down, the cameraman will have a closeup shot of the impact, thanks to Bell & Howell zoom lens mounted on camera. New lens can zoom instantly from wide-angle to telephoto to reach out and follow the ball down the alley. It's available for other 16mm cameras, too.



ANGENIEUX-DESIGNED zoom lens provides versatility of many lenses in one, affords fingertip selection of focal lengths from 17mm to 68mm. Through-the-lens finder (dark section) always shows exact field taken in by lens and provides direct focusing.

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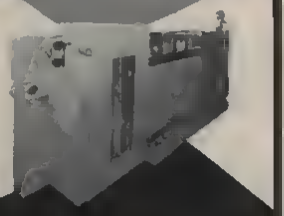

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INFRARED FILM

(Continued from Page 171)

but we soon discovered that if these filters came in contact with the rims of the hot lamps, they would crack when subjected to 20 minutes or more of continuous contact. When these filters were mounted an inch or two from the rim of the lamps, considerable visible white light escaped into the theatre. The problem was finally solved by using filters made of heat-resistant glass. These enabled us to burn the lights continuously for about 30 minutes at a time.

Still, we explored the matter further. A 1940 issue of the *British Journal of Photography* was brought to our attention, which contained an interesting article entitled "Dazzle-free Photoflash Photography." The article described a formula for making a filter coating for flashbulbs used in infrared photography. Essentially the coating consisted of four appropriate dyes which were dissolved in a solution of water, glycerin and gelatin and heated. Bulbs were treated by dipping them in the solution and slowly revolving them as they were withdrawn so the coating would set smoothly.

It was decided to treat the PAR 38 bulbs with a similar solution and thereby eliminate the use of external filters. They were treated in the manner described above (Fig. 5). Four separate coatings proved to be the optimum for ideal infrared illumination. Less than this number permitted the bulbs to give off too much visible light; and a greater number did not cut down appreciably the very small amount of red light emitted by the lamps. The amount of visible light produced by the nine PAR-38 lamps coated in this manner mounted in the 12-ft by 25-ft. theatre, was no more than one might find in the average motion picture house. Incidentally, the specific directions for mixing and using the coating material described above can be found on page 628 of the *SMPTE Journal* for November, 1955.

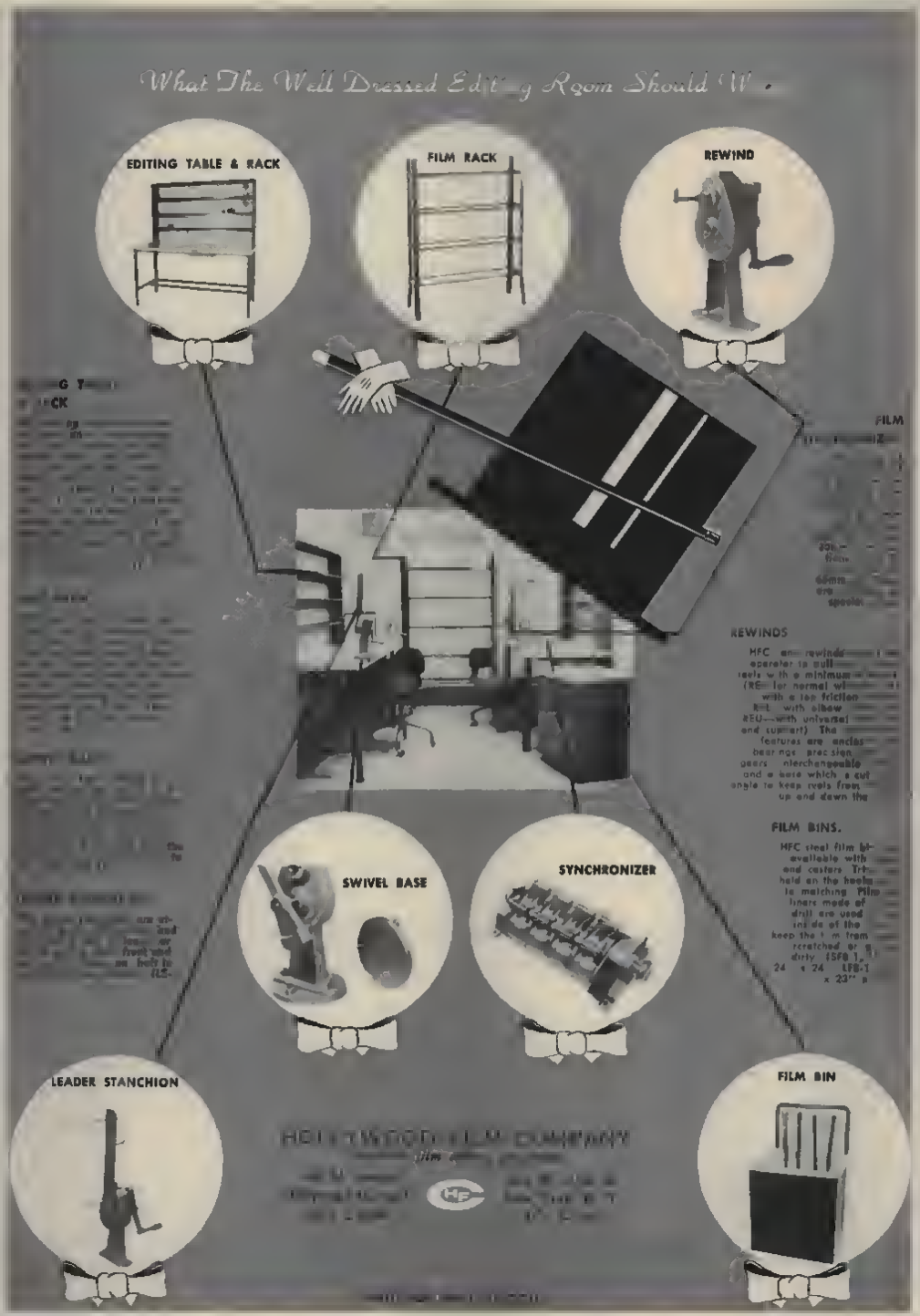
The coated bulbs held up quite nicely for a period of about 40 minutes at 110 volts. However, we discovered that when we put the circuit on a variable voltage transformer and burned the bulbs at 70 volts, they would burn indefinitely without affecting the coating, although the maximum time for continuous burning was five hours. We made no tests for longer periods since the needs of the experiment were such as to necessitate continuous burning of the bulbs for only one hour. It is notable that at 70 volts, up to a point we seemed to get more efficient use of the infrared rays than when the lamps were burned at full voltage.

Next a series of tests were made to determine correct exposure. With slight over-development of the film (to a gamma of about 1.1) excellent results were achieved at 24 fps, with the shutter set at 175° and the lens set at f/4.0. The resulting negative was printable near the middle range on a standard printer.

Our initial tests were badly fogged, however. We discovered that the laboratory had processed the film under a Series 3 safelight. We shot more tests and sent the film to the lab with instructions to develop it in total darkness. Even so, the second film also showed slight but noticeable fog. An investigation of the lab revealed there were minute light leaks within the developing room which were not immediately visible to the eye. These leaks were sealed and the tests repeated. The third attempt was successful and the resulting film showed no fogging whatever. (See Fig. 1)

One requirement of the filming project we were undertaking was that the audience be photographed under normal room light conditions during the discussion that was to follow the showing of motion pictures. This discussion was to be recorded on tape as well as photographed, but good photographic quality was not essential. We decided to use the same infrared film for shooting the discussion period without changing the exposure, since the camera was to be operated remotely. We had no equipment for remote control of exposure, thus our exposure setting remained at f/4.0 when shooting with the normal room lights burning. The illumination, measured from a position near the seats, was approximately 12 foot-candles. The resulting negative was well over-exposed but printable at the very high end of the printer scale (See Fig. 2). The film speed of Eastman Kodak High Speed Infrared film exposed to white light we estimated to be well over 10,000 when developed to a gamma of about 1.1. The picture quality, however, was quite grainy and showed the characteristic penetrating image of infrared. But for a photographic record it was otherwise excellent.

In photographing the groups who took part in this photographic experiment, care was taken not to make them aware they were being photographed during the screening of pictures and afterward during the discussion. To conceal the camera and tripod, a large panel was set up at one side of the projection screen. It was decorated with a false grill, suggesting a speaker port; a smaller port below it provided the necessary opening for photography. At first we sought to camouflage this port, too. We tried "one-way" mirror glass, but the light loss involved was close to three f/ stops. Then we tried covering it with various types of mesh cloth and screen-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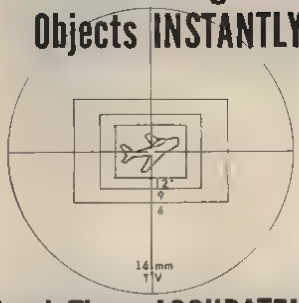

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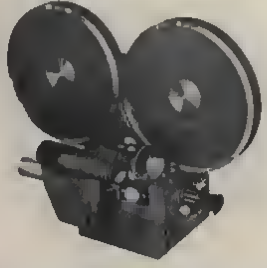

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ing. The most suitable material proved to be ordinary aluminum window screen mesh. When the room lights were on, enough light was reflected from the aluminum mesh to prevent the audience seeing through it to the camera at the rear. Light loss induced by the mesh was but ⅔ of a stop and there was no great loss of definition in the photographed image.

Later we made an interesting discovery: when we left the screen off the camera port, no one in the audience ever noticed it, even though the glass of the camera blimp and even the lens could easily be seen when attention was drawn to them.

The photographic procedure for these experiments was fairly standard. A Mitchell 16mm camera with 1200-foot magazine was used, concealed behind the screen described above. An eight-minute motion picture was projected for the audience, which was followed by a twenty-minute discussion. Camera, projector and recorder were all operated by sync motors. When the screening ended, the camera and sound recorder continued operating to record in picture and sound the discussion that followed.

The problems encountered in this project and their respective solutions proved a real challenge, but at the same time we were enabled to discover, through practical application, the startling potentials of infrared film in the field of specialized motion picture photography.

ED NOTE: The project described above was conducted at the University of Southern California, Department of Cinema, under U. S. Public Health Service Grant No. 3M 9066, under the direction of Dr. Lester F. Beck. Besides author Kantor, Lorene Johnson and Charles Van Horne were associated in the work.

COLOR POSITIVE PRINTING

(Continued from Page 173)

But, let's get back to the printing processes, and the present status.

There was a good deal of confusion created by the introduction of the 35mm color negative not too many years ago, the Calvin report goes on to say. "It was at first considered the answer to all production and printing problems—but producers soon learned that much could happen between the 35mm camera negative and the eventual 16mm color positive print.

"Certainly, there are elements of opinion involved as well as variations between laboratories (and even within one laboratory at different times), but we have no question whatsoever regarding the basic conclusions:

"In choosing the camera material, utilize 35mm for 35mm distribution, 16mm for 16mm distribution.

"If the choice *must* be 35mm (because of policy, or other reasons) and 16mm prints are the principal requirements, for faster delivery and lower cost order the 16mm contact print made from a 16mm color dupe negative.

"If the film is shot on 16mm color reversal, color positive prints through the intermediate negative are the obvious choice for very large distribution—if for no other reason than the cost factor. For smaller orders the producer would do well to view a direct reversal print compared to a positive print, and then make up his mind."

These are the conclusions of the Calvin Company with regard to a phase of film production with which they are long familiar and, by reputation and experience, well qualified to speak. For many readers in the non-theatrical film field the summary will give the answers to the question of "how to shoot it" and "how to print it."

CINE-VOICE CONVERSION

(Continued from Page 164)

I had previously used an Auricon Cine-Voice camera adapted for the "piggy-back" 400-foot magazine with good results, as long as we had access to stable 110-volt current supply. Because a great deal of TV news in Indianapolis invariably involves some celebrity or well-known political figure making an address, it is often necessary when photographing them during their speech-making to "drop in and out" at intervals with the hope that a complete thought has been registered on the sound track—something we never know for sure until the film is "souped" later. This means that, in order to get at least 30 seconds of acceptable film, we might have to shoot as much as 300 feet of the event. The 400-foot camera, therefore, is a "must."

Instant mobility was another consideration. We knew that in order to be ready at all times to go anywhere to cover an event, the camera must be completely mobile and operate independently of the usual 100-volt power sources. And since another of our requirements was that our sound camera must be hand-held on occasion, we decided against any Cine-Voice modification which mounted the 400-foot magazine atop the existing camera housing. Such conversions are too bulky and out-of-balance for hand-held operation.

We found that a number of Cine Voice conversions are made by cutting

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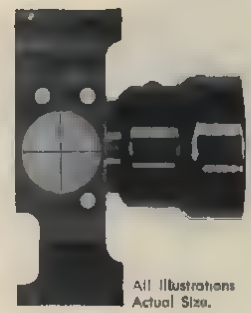

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the camera housing down to the minimum and mounting the new and larger magazine on top, reducing the overall height to just under fourteen inches. In this type conversion, both 400- and 1200-foot magazines can be used—the latter with tripod, of course.

Still another factor in choosing the right conversion was efficient takeup—very important where film load is increased four times. Some Cine-Voice modifications, we found, employed the camera motor also to drive the takeup side of the magazine. On this point we had checked with Berndt-Bach engineers who doubted the efficiency of this method, pointing out that the Cine-Voice motor was designed essentially for driving 100-foot lengths of film through the camera. This resulted in choosing a conversion that employed a separate takeup motor for the 400-foot magazine.

We purchased the single-lens model Cine-Voice for two reasons: it was less expensive and by mounting it with a Pan-Cinor zoom lens, we could shoot with fewer interruptions and at the same time keep our framing variable. Also, for hand held on-the-spot sound shots we could use a single 12mm f/1.2 lens for best all-around work. This enabled us to practically forget focusing in fast, critical shooting when stopping to check focus could mean losing a shot.

Thus we now had a 400-foot sound camera which, including the 12mm lens and viewfinder door supplied by Auricon, was still light enough to permit hand-held operation for at least sixty seconds without noticeable fatigue to the operator. All we needed now was a dependable 110-volt power supply—one that would be small enough for the operator to carry with ease yet powerful enough to operate the camera plus takeup motor for not less than 11 minutes at a time.

The supply house that modified the camera had a new power pack which would efficiently drive the camera and the 400-foot magazine takeup motor. With this power supply we found that, under average conditions and normal temperatures, we could count on 15 to 20 minutes camera operation before the voltage would drop noticeably. In cold weather, we had to restrict shooting to periods of 5 minutes or less, otherwise camera operation would become sluggish.

This power supply consists of a 6-volt nickle-cadmium battery driving a 60-cycle vibrator coupled with a 6-volt-to-110-volt transformer. A built-in charger cuts out automatically when the battery attains full charge.

Our one remaining problem was to get all this equipment down to a decent size so that, whenever the occasion arose, one man working alone and afoot could easily carry camera, power supply, amplifier, mike, and cables. The matter of compactness and weight in the camera had already been taken care of. Our attention now turned to condensing the electronic components into a workable package. A case was fashioned from tough, lightweight veneer reinforced with metal. The power supply was placed in the bottom and the amplifier controls, and batteries on top. The quick removable lid was made of plastic which afforded visibility of the dials. For a carrying strap, we choose a length of Nylon automobile seat-belt strap and bolted the ends securely at either side of the carrying case. This type strap is wide enough and sufficiently pliable to afford utmost comfort to the used over long periods.

To minimize the cable problem, we purposely shortened the mike cable to six feet — adequate for average shots made by a walking cameraman working with a hand-held camera. Extension cables are provided for use in special situations that require them.

Light weight as well as high efficiency was a factor in choosing a microphone for use with this equipment. We selected a lavalier-type (Electro-Voice, Model 647) which proved to be the best all-around mike we have yet used in this

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type work. It can also be mounted on a stand.

Illumination for indoor shots was the last but by no means the least problem to come up for consideration. Here again compactness and light weight were essential factors. A special bracket was mounted on the camera to accept a two-light photolamp bar for 110-volt power source operation, or take the battery-operated Frezzolite, powered also from our power-pack.

As most experienced 16mm cameramen know, the Cine-Voice operated under proper conditions delivers quite acceptable audio quality. We found, however, that we could noticeably improve the response by replacing the 50 ohm input transformer with a high-quality broadcast-type transformer. Projection tests of regular Kodachrome shot with this setup showed that playback quality was equal to that of the average tape recorder.

So successful has been the use of this equipment at WLWI that we gladly recommend it to other newsfilm organizations aiming for the same production quality and working portability we have achieved. Our "hybrid" rig has been in daily use since October, 1957, supplying sound film for most of WLWI's daily news programs. The complete unit weighs but 21 pounds. My associate George Willeford and I have used it successfully on assignments ranging from Christmas Shopper interviews to documenting the maiden flight of a new turbo-prop airliner flying at an altitude of 20,000 feet.

16MM ZOOM LENS

(Continued from Page 177)

what the lens sees at all times. This entirely eliminates parallax problems (such as cutting off part of subject when filming at close range). The finder system provides direct through-the-lens focusing and shows the total region of sharpness covered by the lens at a given focus setting. Sharp focusing is facilitated by a ground-glass spot in center of the finder field. To obtain the sharpest possible focus, the lens is first set at 68mm and the aperture at f/2.2. After focusing, focal length and iris can be reset as required for the desired angle of view and correct exposure. Ring-calibrated for distances from 48 inches to infinity, the lens will focus down to 18 inches. No exposure increase is required when the focal length is increased—a significant development in optical design.

Attached to the lens but removable is the reflex, through-the-lens type viewfinder (See photo bottom of page 177.). By means of a beam-splitting prism in the finder system, the subject image is reflected directly from the lens. The finder can be rotated a full 180° out of the way to facilitate loading of the camera. The finder mask can be oriented and locked after the lens is installed, to provide level rather than a tilted image—a feature that makes the lens adaptable to a wide range of 16mm cameras.

Focusing eyepiece of the viewfinder is adjustable for individual user's vision. By means of a ring at the rear of the finder, the eyepiece shutter may be closed to prevent stray light from entering and reaching the film through the optical system. An eye cup shuts out distracting light from the user's vision and is removable for the convenience of those who wear eyeglasses.

The lens measures 4½ inches in length and is unusually light in weight for a zoom-type lens. Designed by Pierre Angenieux, one of the foremost optical designers, it is made to Bell & Howell specifications at the Angenieux factory in the south of France. It fits all Bell & Howell 16mm cameras, except the electric-eye models, and most other standard C mount 16mm cameras. Lits price is $429.95.

WALKIE-TALKIES

(Continued from Page 168)

tion. What we had to watch out for was, of course, the possibility of breakdown and if one link failed whether there was an alternative one available.

Every possible contingency was discussed at a conference with officers of the Army units concerned. The Army promised the use of thirty-six Type 88 walkie-talkies and six Type 31, plus spares for the two days' shooting. For the rest of the location at Rye, requiring smaller Army formations, Ealing's own R/T sets would suffice.

The nerve centers of the scheme were three walkie-talkie sets, each transmitting on different frequencies, with microphones labelled (a) Army, (b) Special Effects and P.A. and (c) Boats. The Army transmitter on Channel A enabled instructions to be given to all Army formations through the Type 88 walkie-talkie sets. Each formation was identifiable by a letter and a number, e.g. B1, C3, etc. Microphone (b) was connected through an Ealing R/T set on Channel B with walkie-talkie sets carried by the Special Effects men operating special smoke-pall apparatus behind the dunes. On request, this radio link could be connected up with an elaborate public address system consisting of twelve super-powered Tannoy speakers hidden in strategic positions along a mile-and-a-half of beach.

Microphone (c) communicated with two or three selected "little ships" off

One should avoid wildly-moving frames, such as tree branches in a high wind, flapping awnings or dancing leaves—because the movement will detract from the main action. Camera movement toward, away from or across a frame is permissible providing the frame itself remains more or less static. A slow pan or dolly shot that ends in a beautiful frame as the camera gradually moves into position can be very effective. A dolly may pull back in a tracking shot and go through a doorway to frame the remainder of the scene. A moving camera mounted on a car or train may frame a distant tunnel opening which gradually becomes larger and reveals more and more of the view until it finally bursts wide open on the screen. Panning across an area with strong verticals close to the camera should be avoided otherwise a *chatter* effect or a stroboscopic fringing that is most annoying will result.

Frames should be sharply defined. Nothing is so disturbing as an out-of-focus foreground object. Split the focus or employ the hyperfocal distance to keep the frame and the background action both sharp. A slightly soft-focus frame is often permissible where sufficient depth-of-field is unattainable, providing it is underexposed or in silhouette. A wide-angle lens will prove useful in making such shots since it possesses a much greater depth-of-field than a normal objective. However, use of a telephoto may sometimes be necessary in order to film a nearby foreground frame and enlarge the more distant subject. Where the subject framed is too small, in relation to the frame itself, it can be made to appear closer and larger in this way.

Never tease the audience with too little of a frame, so that they are not quite able to make out what it is. A good frame is immediately identifiable, ties in with the setting and does not steal the scene. A frame composed of a single large tonal mass—such as an arch—is much better than one made of many small or irregular details, such as an ultra-fancy iron grille, for example. Choose camera angles carefully where framing is employed. Often a shift in camera position of only a few inches will provide a better contrast or placement of the frame in relation to the background.

Despite the compositional advantages of frames, they nevertheless should be used sparingly — never for every shot. An appropriate frame, carefully composed and properly photographed becomes a doorway with a welcome mat that invites the audience to come in and be a part of the picture.

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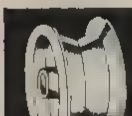

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FILMING ON A MILE-LOW LOCATION

(Continued from Page 158)

"Why me?" I asked.

"You're the logical one to do it," Kahs answered. "You have the experience and knowhow plus an Akeley camera and telephoto lenses I want used on this job." I agreed to read the script.

The scenes to be shot at Grand Canyon were for a sequence in the picture that has to do with a gang of hot-rodders' search for uranium: they risk flight into the uncharted canyon and crash. The scenes would be simple enough to film; it was getting to the location that was the risky thing. After taking off by plane on the canyon rim, we would have to glide slowly a mile down to the canyon floor to the location site previously selected in an aerial location-scouting trip.

My thought went back to the time many years ago when I had flown down into the canyon to make a picture titled "Air Tour of The Grand Canyon." I think we were the first ever to fly into the canyon—certainly the only ones crazy enough to skim low over the turbulent river to shoot the famed Havisupi waterfall. Our craft was a little 85-hp. single-motor open cockpit job, and it struggled for more than an hour to rise to the canyon rim against treacherous wind currents and down drafts that always prevail in narrow canyons and gorges. We had just barely reached the rim level in this tortuous ascent when the plane developed engine trouble. Besides, we met unexpected strong winds from the South that blew us away from the direction our airport base was located. Finally we encountered a heat thermal (an updraft of warm air) and this spiraled us upwards to an altitude of about 5 000 feet. Normally the little motor would rev up to 2000 rpm. But the best we could get out of it was a sickening 1200. So we started looking for a "soft" place to land in a glide—we were still too far away from the Cameron airport to make it in a glide. We spotted a lone wagon road threading fairly straight through the Painted Desert, and it was decided to bring the plane down there. We didn't stop praying even after the plane rolled to a halt. We bedded down in the craft for the night, slept through a howling windstorm, and the next morning set out afoot for Cameron.

You'd think that after an experience such as this, I'd think twice before undertaking a similar assignment. But time erases memories of the real hardships and the positive declarations of "never again!" that invariably follow such experiences and besides I sensed a challenge in this assignment.

So one morning not long afterward I found myself mouting my Akeley camera in the little Cessna plane that had been chartered for the "Hotrod" picture assignment. We had just huddled with the director and producer and mapped out the series of scenes that were to be shot in the air and on the canyon floor. Our initial flight off the canyon rim was a mighty thrill. Suddenly the earth seemed to fall away and we were looking straight down a mile below to the river's surface.

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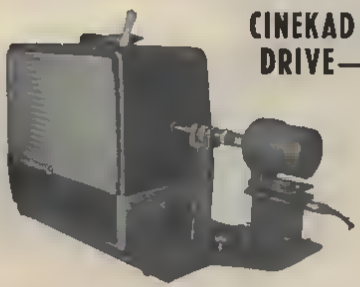

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Spiraling, then gliding, we dropped down. Soon we could see our landing strip—a narrow ribbon of hardpacked sand at the river's edge. My camera was mounted in the door of the plane and I had been shooting on and off almost ever since our takeoff. As we neared the canyon floor our sandbar landing strip assumed larger proportions, and we could see that the two planes, which had also been chartered as props for the picture, had made safe landings and had taxied away from the landing area.

As we skimmed down over the river to come in for a landing, I re-checked the prevailing light, adjusted my lens and resumed shooting, filming scenes of our approach which would double in the picture for the same action of the two planes already landed.

It was the first time our pilot had ever flown down into the canyon. As we came in the strip seemed to narrow awfully fast so that the rugged canyon walls were dangerously close on one side and the muddy waters of the Colorado ominously near on the other. Suddenly an unlooked for air current jolted the plane toward the river. I kept the camera running. In what seemed less than three feet of travel, we appeared to drop twenty feet. The jagged terrain was now dangerously close to the plane's wheels. But our pilot kept a cool head and soon had the plane under control. Then as we continued the descent, a rocky projection suddenly loomed up. One wheel glanced off a boulder and blew a tire and we came in on one wheel and a lot of prayer!

Back on terra firma again, we found the canyon floor like a vast oven in midday, cool and soothing after nightfall. Now began the real work of shooting on this assignment. The ever-changing aspect of the colorful canyon backgrounds, due to the progressive changing of the sun's position during the day, posed one of the major photographic problems inasmuch as it concerned the matching of takes in a given sequence. It wouldn't do to shoot a long shot in mid morning and then make shots of a continuation of the action several hours later in mid afternoon, the time change would be too obvious visually.

Getting effective long shots in black-and-white of the planes flying against canyon walls also proved a tricky thing. Here the canyon is quite deceptive. Distances are impossible to calculate. Shot in the wrong light, a plane in flight soon emerges into the mosaic pattern of the canyon walls. For shots of this type I employed my larger telephoto lenses, and the Akeley camera became virtually a tracking camera, thanks to its incomparable gyro tripod head.

Following this we photographed the closer shots of action on the ground and around the "wrecked" plane, which wound up the assignment.

The plane trip back to the airport on the canyon rim was uneventful. Afterward, I stood there looking out over the vast, indescribable scene and watched the play of light on the countless peaks, canyons and crevices as the sun played hide and seek with billowing, cottonball clouds that moved lazily overhead. I wanted to unpack my camera and face the challenge nature was dangling before me at the moment—to put that awe-inspiring, multicolored panorama on film. But no, I thought, I'll come back again and do it leisurely—on my own personal assignment.

PHOTOGRAPHIC ASSIGNMENTS

(Continued from Page 150)

● PAUL IVANO, "Telephone Time,"* with John Nesbitt. Various directors.

● LOTHROP WORTH, ASC, "Love That Jill"* William Seiter, director.

SUTHERLAND STUDIOS

● WINTON HOCH, ASC, Chemical Association Educational film. John Sutherland, director.

● GILBERT WARRENTON, ASC, United Fruit Company commercial.* John Sutherland, director.

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● GILBERT WARRENTON, ASC, "Farmers Insurance Company commercial.* Robert Watker, director.

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● ARTHUR ARLING, ASC, Chrysler commercial.* Jack Daniels, director.

● JAMES DROUGHT, DuPont commercial.* John Sherwood, director.

● IRVING GLASSBERG, ASC, "Halo Shampoo and Gaines Dog Food commercials.* Jack Daniels, director; Schmidt Beer commercial.* Virgil Vogel, director.

● RUSSELL METTY, ASC, "The Water Witch" with Andra Martin and William Reynolds. Wil Cowan, producer-director.

● PHIL LATHROP, "The Perfect Furlough" (Color & CinemaScope) with Tony Curtis and Janet Leigh. Blake Edwards, director.

(Continued on Page 190)

Note:

The television productions in the listings in these columns are indicated by asterisks.

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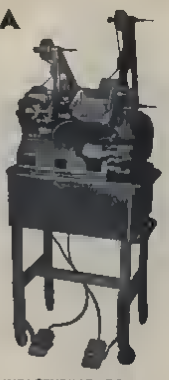

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(Continued from Page 187)

● Clifford Stine, ASC, Gaines Meal commercial * Jack Daniels, director.

20TH CENTURY-FOX

● Milton Krasner, ASC, "A Certain Smile" (CinemaScope & Color) with Rossano Brazzi and Christine Carere Jean Negulesco, director

● Leon Shamroy, ASC, "The Bravados" (CinemaScope DeLuxe color, shooting at Morelia, Mexico) with Gregory Peck and Joan Collins Henry King, director

● Leo Tover, ASC, "A Nice Little Bank That Should Be Robbed" (CinemaScope) with Tom Ewell, Mickey Rooney and Dina Merrill Henry Levin, director

WARNER BROS

● Joseph La Shelle, ASC, "The Naked and the Dead" (CinemaScope & WarnerColor, RKO Pictures) with Aldo Ray, Cliff Robertson and Raymond Massey. Raoul Walsh, director

● Frederick A Young, "Indiscreet" (Grandon Prod shooting in England) with Cary Grant and Ingrid Bergman Stanley Donan, producer director

● Joseph Biroc, ASC, "Home Before Dark" with Jean Simmons and Dan O'Herlihy Mervyn LeRoy, director.

● J. Peverell Marley, ASC, Maryland Club Coffee commercial * Pete Monahan, director; Crest commercial * Dave Monahan, director. Lustre Creme commercial * Robert Larsen, director

● Harold Stine, ASC, "Sugarfoot" * with Will Hutchins. Monty Pittman, director; "Cheyenne" * with Clint Walker Lee Sholem, director

● Ralph Woolsey, ASC, "Cheyenne" * with Clint Walker Lee Sholem, director. "Sugarfoot * with Will Hutchins Richard Bare, director

● Frank Planer, ASC, "The Nun's Story" (WarnerColor, Fred Zinnemann Prod ; shooting in Africa) with Audrey Hepburn and Peter Finch. Fred Zinnemann, director.

● Arthur Feinoel, ASC, Kaiser Aluminum commercial * Various directors, Crest and Gillette commercials * Robert Larsen, director.

TIME OUT ON A TURTLE

WHETHER THE location is in the Arctic or the tropics, shooting is the same gruelling grind for the director of photography whose responsibilities combine scene composition, lighting camera operation overseeing the operations of his crew, and satisfying the screen director Here, Leon Shamroy, ASC, directing the photography of 20th Century-Fox's "South Pacific" on location in Hawaii, enjoys smoke and slow ride on sea-going terrapin as he ponders his next camera setup Rushes indicate he has another Academy Award contender in this one

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"Funny Face"
Produced by Hal Wallis
for Paramount

William Mellor, A. S. C.
"Peyton Place"
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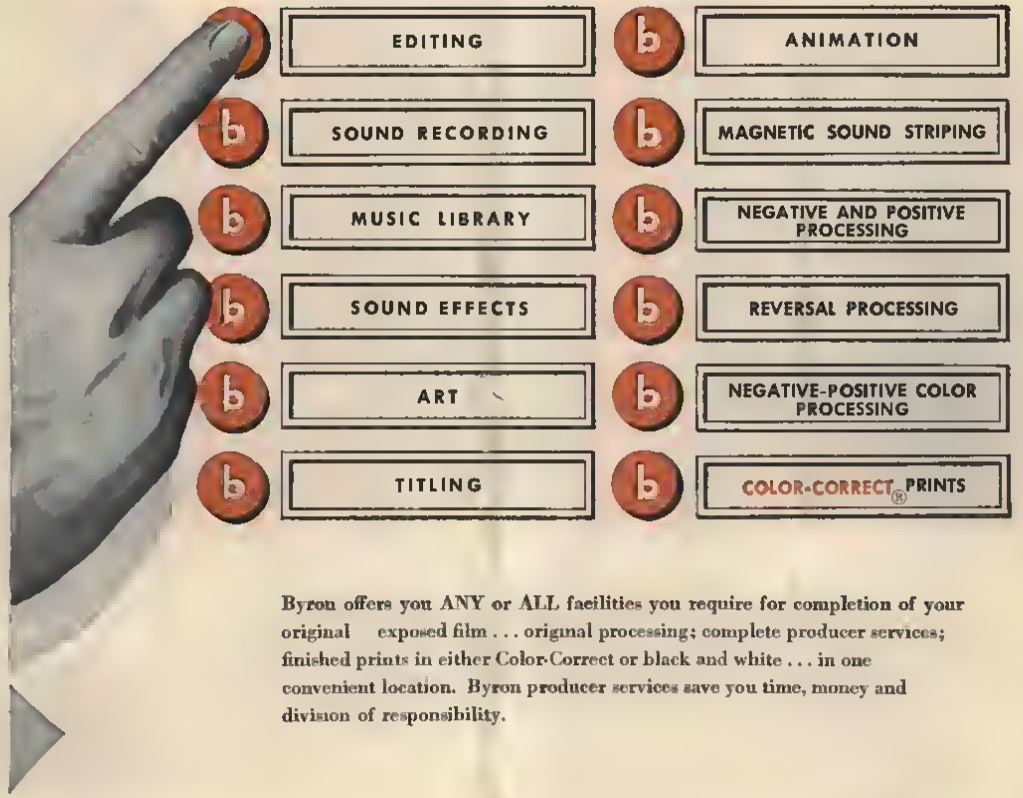

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